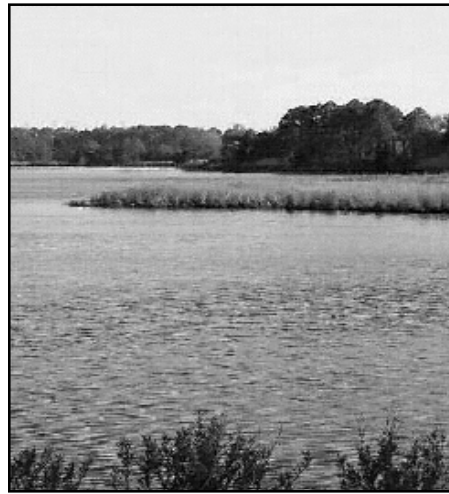


# Maryland's Tributary Teams 1999 Annual Report

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## *Charting Our Course*




*Helping to Restore the Bay,  
One Watershed at a Time*

December, 1999



# Maryland's Tributary Teams



*...helping to reduce nutrient pollution  
and restore the Chesapeake Bay,  
its rivers and streams.*

Dear Fellow Marylanders:

On behalf of the Maryland Tributary Teams, we are pleased to present to you our collective efforts and goals summarized in our 4<sup>th</sup> Annual Report. Each of the ten Tributary Strategy Teams has worked, in its own individual way, to solve nutrient pollution and related problems in order to restore the balance in Maryland's river and Bay ecosystems.

Our Teams are comprised of talented individuals representing farmers, business, all levels of government, developers, conservation organizations, educators and private citizens. The ten teams are made up of nearly 300 members across Maryland. This report communicates our 1999 activities.

Our Teams have worked in every manner available to us: through public education, by molding or changing policies, through hands-on activities, and through workshops, dialogue, and discussion. We believe that our Teams, and the local and state governments that we work with have moved Maryland closer toward our goal of clean water and healthy habitat.

We invite you to join us in any of our monthly Team meetings held throughout the state. By working together, we believe we are and will continue to make a difference.

To our fellow Team members and participants, we would like to thank you for your efforts, for your vision, and for your continued participation in this program. It is because of you that we will succeed.

# INSERT LETTER HERE

# Year in Review



**1999** was a busy year for Maryland's Tributary Teams. As befits the last year of the century, it was a year focused both on continued work on key issues, and looking forward toward a vision of the Bay over the coming decades. The renewed Chesapeake Bay Agreement was a major focus for each of the Teams. Other central concerns were poorly managed septic systems and stormwater facilities, which threaten many waterways statewide. While continuing to work on issues of local concern, the Teams found new effectiveness in working together to raise these issues of statewide concern. In response to past requests for more resources, 1999 marked the first year for Tributary Team habitat grants — funds available to Teams and their partners to undertake restoration projects.

This year also marked a “watershed” in public outreach. Teams rose to the challenge issued by Senator Bernie Fowler to create “wade-ins” in their own tributary basins to raise community awareness of water quality issues. These events were a great success, and — we hope —

will become local traditions, just as Bernie's annual search for his toes has. The publication with the Baltimore Sun of a practical guide for Marylanders on how to protect water quality was another milestone in public outreach, reaching over one million readers.

While we celebrate these accomplishments, we also spent time reflecting on how much remains to be done to protect our Bay, rivers and neighborhood streams. Teams provided feedback on new goals and commitments that should be incorporated into the renewed Chesapeake Bay Agreement now being developed. Recognizing the key role that local governments play in watershed protection and restoration, Team members also criss-crossed their basins to brief local elected officials on this Agreement, and the work that the Teams are doing to implement our current commitments.

Maryland's Tributary Teams' accomplishments are built on the cooperative effort of citizens with local and State governments. We thank all of our partners, and invite new readers to join us in our efforts to leave a healthy ecosystem as a legacy for those who follow us.



## Note to Readers:

Last year, Maryland's Tributary Teams published their first consolidated annual report — allowing readers to catch up on the activities of all ten teams in a single publication. This year continues that trend. The detailed implementation and water quality data found in last year's report is not reprinted here, but will be updated in next year's report. In the meantime, the most current information on water quality and habitat conditions can be found on the Department of Natural Resources' web site: [www.dnr.state.md.us/bay/tribstrat.html](http://www.dnr.state.md.us/bay/tribstrat.html).

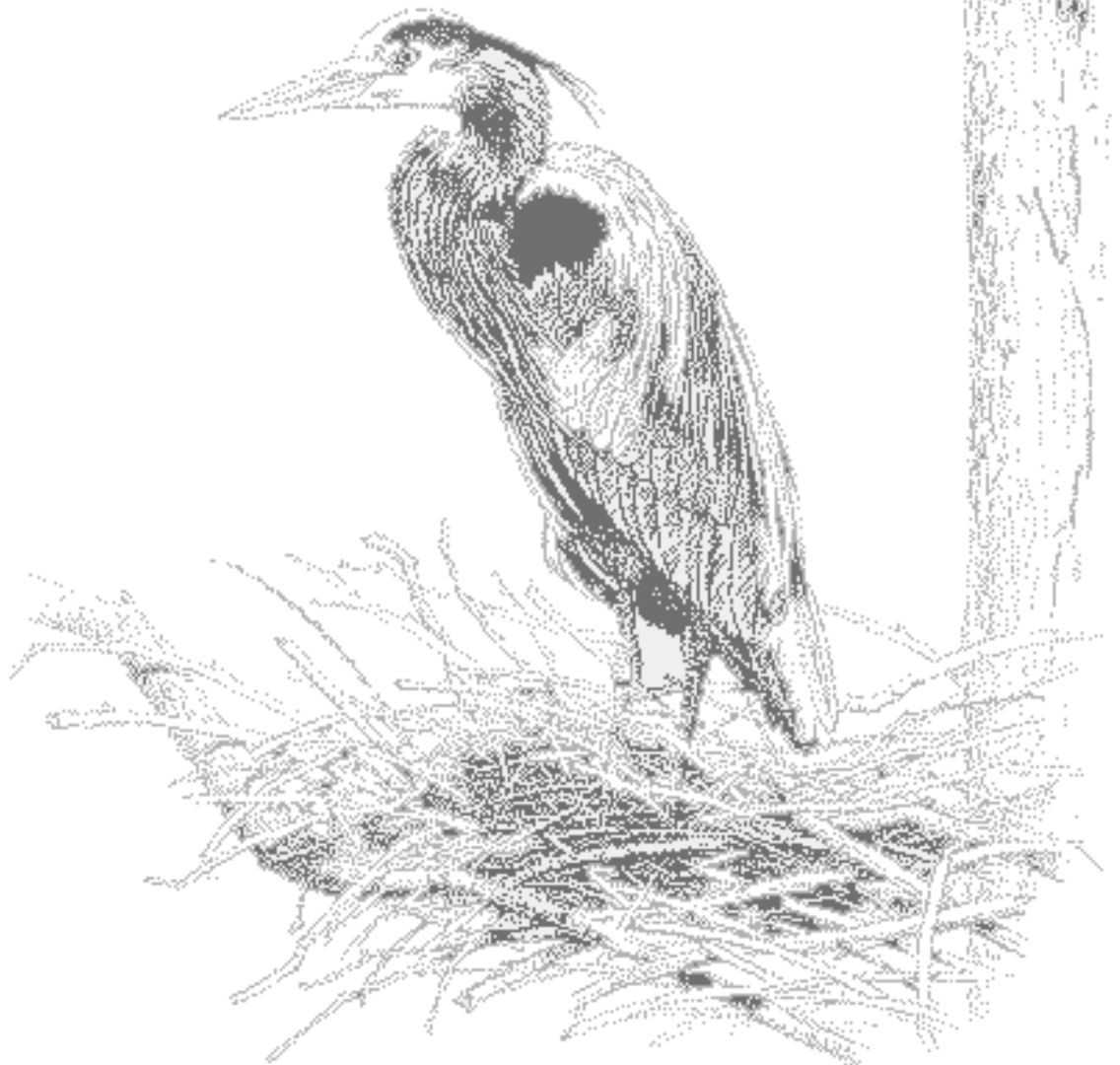
# Maryland's Tributary Teams' Mission Statement

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**In support of the Chesapeake Bay Agreement, the mission of Maryland's Tributary Teams is to:**

- Support and promote actions and policies to ensure healthy watersheds with abundant and diverse living resources;
- Through education, heighten awareness of each individual's impact on water quality;
- Promote implementation of projects to restore and protect living resources and water quality; and,
- Facilitate communication and coordination among governments, landowners, businesses, and all other citizens toward this common goal.

Tributary Teams mission statement adopted by  
the Coordinating Committee, June 1999.



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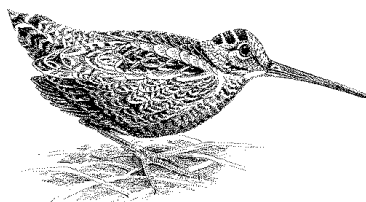
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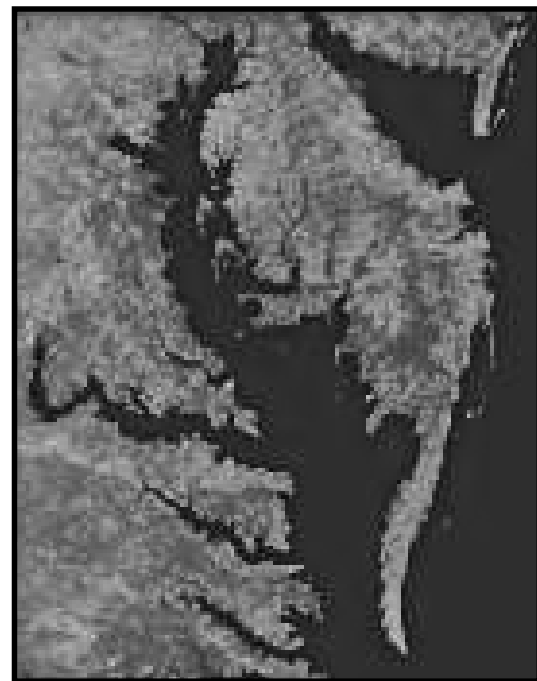
# Restoring the Bay

## Renewed Chesapeake Bay Agreement

The 1987 Chesapeake Bay Agreement is the foundation of the Bay restoration partnership. Cited as a model for ecosystem restoration around the world, one of the reasons for the program's success to-date has been high level commitments to specific, measurable goals. In 1999, the Chesapeake Bay Program began an effort to create a renewed Chesapeake Bay Agreement, with new goals and commitments for the coming decades. The Tributary Teams have been actively involved in this effort.

In Spring 1999, eight of the Teams conducted "focus group" discussions to identify and comment on key successes and failures of the Bay Program; priority challenges; emerging issues; possible solutions; ways to measure success; effectiveness of the Bay Program; and areas for improvement. This feedback was part of a public process coordinated by the Alliance for the Chesapeake Bay, and served to identify key issues to be included in the revised Agreement. In Summer 1999, the Alliance published a summary of the public comments they had received from all sources, entitled "Listening to the People." In this summary, managing growth and communication and education to promote changes in individual behavior were the top two concerns.

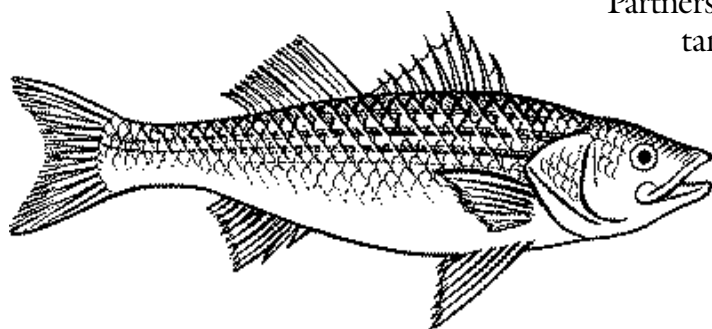
During the Fall, Team leaders met with the Bay Cabinet to provide input on concepts for the draft Agreement. A draft was released in December 1999, and the Teams will be actively involved in soliciting public comment on the document. Public comments on the draft will be accepted until March 31, 2000. After that date, the draft will be revised in response to the feedback received, and will be formally adopted by the Chesapeake Bay Executive Council.



*With 300 new people moving to the Bay watershed each day, how we prepare for our growth now will dictate the environmental health of our tributaries tomorrow.*

## Local Government Outreach and Local Government Agreement

Local governments are responsible for implementing many of the programs that contribute to our Chesapeake Bay goals. Because of this critical role, Team members suggested that the 1993 Chesapeake Bay Partnership Agreement with local governments be updated in tandem with the renewed Chesapeake Bay Agreement.



In 1993, Maryland's counties signed a voluntary agreement — unique in the Bay watershed — committing to participate in the development and implementation of the Tributary Strategies. Team members saw an opportunity to update this document to recognize the key role of local governments

in watershed restoration, the role of the Tributary Teams in promoting these goals, and the need for State and local governments to work cooperatively on local watershed and Bay restoration efforts. This year, local government and State staff drafted a Maryland Local Government Partnership Agreement. This language will be reviewed in light of the renewed Bay Agreement, and plans will be made for its signing in Summer 2000.

## Tributary Team County Briefings

In a focused effort, numerous Team Members, including Chairs and Vice Chairs, as well as State agency representatives briefed the local government elected officials about the Tributary Teams, their goals and accomplishments, and the new Partnership Agreement. Nearly every county was briefed in 1999, and the Teams received much valuable feedback from local officials on their work. Elected officials were interested in many of the issues that the Team members raised during the briefings and asked questions on almost every issue that Team members have found themselves engaged in during the last several years. Tributary Team members answered question regarding: TMDLs, exotic species in ballast water, Site 104, Tributary Team membership, the Patuxent Policy Plan, impervious surfaces, growth and development, Back River WWTP, tree planting programs, changes in regulations to road standards, bioretention, the Forest Conservation Act, buffers, WWTP permits for Little Patuxent, Smart Growth, cost share for stormwater management, coordination on shore erosion control, the Shore Erosion Task Force, oyster long lines, living resources, Legacy Open Space, the Public Drainage Task Force, CREP, funding for cover crops, nutrient reduction and shore erosion, and citizen education.



*State Delegates from the House Environmental Matters Committee watch as children from Severn River communities place oyster spat and plant underwater grasses.*

## Legislative Environmental Briefings

In January, Team members presented information on key environmental issues to the House Environmental Matters Committee and the Senate Economic and Environmental Affairs Committee. During Summer 1999, Team members gave presentations during Chesapeake Bay field trips organized for each committee by the Department of Natural Resources. Members from several Teams updated the legislators on key Team initiatives and concerns, including the nutrient loads from septic systems in Maryland, the need for stormwater financing, Team habitat restoration projects, and the Teams' Sun insert project. These briefings provided an opportunity for dialogue between legislators and Team members.

## Meetings with the Governor and Chesapeake Bay Cabinet

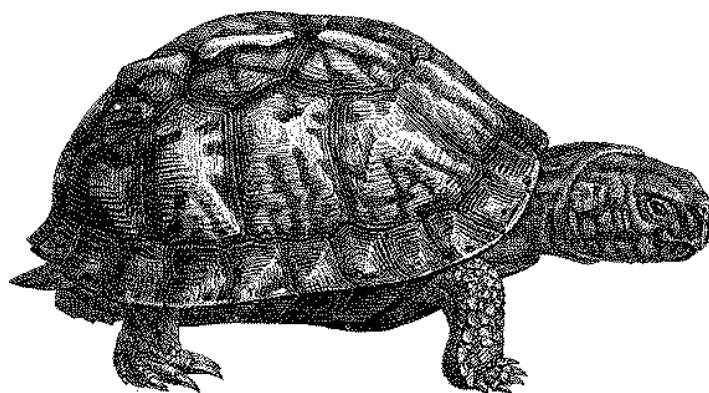
Team leaders met with the Governor at the 1999 Annual Meeting in January. The Governor complimented the Teams on their hard work, and noted that Maryland is becoming a national model because of our work on Smart Growth and Chesapeake Bay restoration. Team leaders reported on

their work over the past year, and highlighted key issues: septic systems; stormwater and its links to growth management; agriculture — especially the need for a continued cover crop program; and public outreach and education.

In addition, Team leaders met with the Governor's Chesapeake Bay Cabinet three times. The Teams were very glad to welcome the Department of Transportation to the Bay Cabinet in September, a step advocated by the Teams to increase coordination with this important agency on environmental issues. Other key issues addressed through these meetings included comments on topics for the renewed Bay Agreement; the Teams' On-Site Sewage Disposal Task Force; stormwater financing; and outreach through the Baltimore Sun insert.

## Coordinating Committee

The Coordinating Committee had an active year, meeting four times (March 10, May 4, July 7, and September 23). A key accomplishment was the May Tributary Teams retreat, where the committee and local government representatives reviewed the mission and accomplishments of the Teams and developed a revised mission statement for the Teams (see introduction). The group also brainstormed new goals for the Teams, which were then taken back to individual Teams as a starting point for their strategic planning for 1999 and 2000. Other important issues addressed by the Committee included the Teams' involvement in the renewed Chesapeake Bay Agreement, State agency support for stormwater financing, septic systems, and public outreach.



## Maryland Nutrient Cap Strategy

In 1999, the Chesapeake Bay Program conducted two related efforts to address how the Bay states will meet the nutrient “cap” called for in the 1987 Chesapeake Bay Agreement. By signing the Agreement, Maryland, Virginia, Pennsylvania and Washington DC agreed not only to reduce their nutrient loads by 40%, but *to ensure that these loads do not increase* after the reductions have been achieved.

One way to do this is through nutrient trading. A Trading and Offsets Workgroup has been formed to develop a trading framework for the Bay watershed. It is are expected to report recommendations to the Bay Program in Spring 2000. In addition, a Chesapeake Bay “Cap Issues and Policy Group” identified key issues and recommended an approach that the individual jurisdictions could use in developing their nutrient cap strategies.

In Fall 1999, Maryland took the next step in this process by creating a Nutrient Cap Strategy Workgroup, led by Dr. Tom Simpson (University of Maryland and Maryland Department of Agriculture) and Lauren Wenzel (Department of Natural Resources). Made up of representatives from Tributary Teams, State agencies, local governments, and other stakeholder groups, the Workgroup is assigned the task of developing a strategy by December 2000 for Maryland to meet the nutrient cap. This group will be working closely with each of the Tributary Teams during 2000 to ensure that the strategy is flexible, workable, and attains the goal. A workshop on nutrient reduction and cap issues for the Potomac watershed is also planned for Spring 2000.

## Stormwater Management

The policies of stormwater management have been seriously addressed by many of the Tributary Teams. In an effort to address concerns related to growth and development practices, the Upper Western Shore and Patapsco/Back River Teams requested that the Consulting Engineer's Council of Maryland (CECM) review the document titled





*“The Bay Starts Here” - Students in Anacostia stencil watershed drainage signs to show residents that the Bay is as close as your own sidewalk.*

“Consensus Agreement on Model Development Principles to Protect Our Streams, Lakes and Wetlands” prepared by the Site Planning Roundtable, Center for Watershed Protection (CWP). The Consensus Agreement outlines 22 model development principles ranging from minimum street pavement width requirements to the reduction of minimum parking requirements.

The CECM stated that given the Planning and Zoning Agencies have the greatest authority in the area of land development and building code regulations, they recommended that the Tributary Teams meet with the Directors of these agencies to discuss ways in which these codes and regulations can be modified to be more environmentally friendly.

In addition to meeting with the CECM, representatives from the Developed Lands Workgroup attended a BMC Planning Director’s meeting and presented an overview of the Consensus Agreement. There was general support for the principles outlined in the agreement, but again, many of the Directors felt that the ultimate authority for adopting the principles of the agreement and modifying land development regulations rests at the County Executive level. The Developed Lands Workgroup plans to maintain a continuing dialogue with this

forum and hopes to invite the CWP to a future meeting.

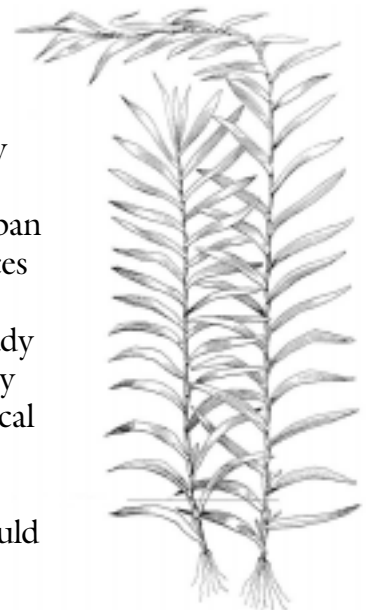
### **Functional Status of Stormwater Management Facilities in the Baltimore Metropolitan Area**

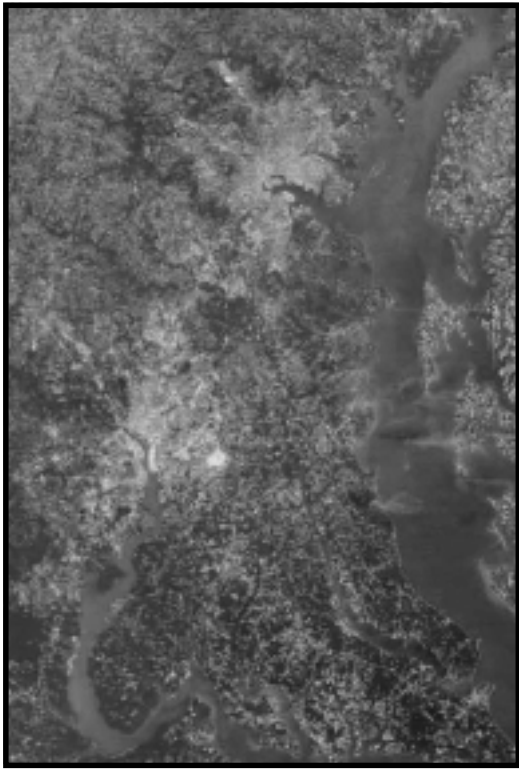
Urban best management practices (BMPs) are extremely important to the Chesapeake Bay’s 40% nutrient reduction strategy, as they reduce nutrient loadings from existing communities as well as new development. However, the assumption that the thousands of urban BMPs accounted for in the Tributary Strategies are functioning as designed is highly questionable.

State and local stormwater regulations were introduced almost two decades

ago, creating a massive BMP infrastructure. A recent survey by the Environmental Alternatives Finance Committee indicated that there are over 9000 BMPs in Baltimore’s Metropolitan Area alone. This same survey highlighted the fact that urban BMPs such as stormwater ponds are not regularly maintained due to inadequate funding, raising a question regarding their performance.

In September 1998, the Upper Western Shore, Patapsco/Back River Tributary Teams, the Baltimore Metropolitan Council, and the Center for Watershed Protection (CWP) received a Clean Water Act Section 319 grant for the first of a two-phase study that would examine the structural integrity of urban best management practices in the Baltimore Region. The first phase of the study developed a methodology for determining a statistical assessment of the performance of BMPs in the Baltimore region that could be applied statewide.





*As more people move to the Chesapeake Bay region, growth and development issues like stormwater management will be the top priorities in the coming years.*

The preliminary report titled “*Assessing the Functional Status of Baltimore Metropolitan Area Stormwater Management Facilities*,” is available from the CWP. The study notably indicated that of the land draining to a stormwater pond, 50% drains to a dry pond (poorest pollution removal) while only 8% drain to an infiltration practice (greatest pollutant removal). It was determined that not enough data was available at the county level to conduct the second phase of the study. It is hoped that more data will be forthcoming from the county governments in the future.

### **Grant Funding Initiative**

Representatives from the Upper Western Shore, Patapsco/Back River and Middle Potomac Team formed an informal workgroup to address the issue of grant funding for urban programs. The Workgroup agrees that the State needs to substantially increase grant funding opportunities specifically available to local governments (as opposed to competing with State

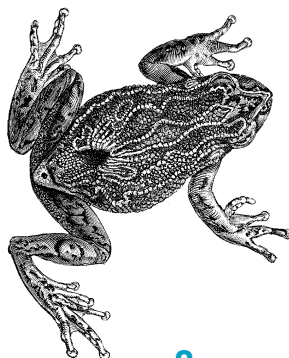
agencies). More grant funding will enable local governments to leverage funds for watershed restoration initiatives. The State’s continued development of Bay goals, TMDLs, NPDES permit requirements and other mandates without any supporting cost-share funding is placing an unfair burden on local governments.

The Workgroup has identified the following problems that need to be addressed:

**Problem #1:** The inability to use Clean Water Action Plan (CWAP) Grants to help meet Municipal Stormwater Permit requirements is not logical, especially if restoration activities under the permit are in the CWAP priority watersheds. CZM and 319 Grant programs are also not allowed to fund projects required by the permit program. **Solution:** The Tributary Teams will send a letter to the Department of Natural Resources to facilitate a meeting between local governments and granting authorities from EPA to resolve the restrictions imposed by CWAP, CZM and 319 Grant programs.

**Problem #2:** Local governments must compete with State agencies and non-government organizations (NGO) for an ever-dwindling supply of grant funds. State and NGO projects are not always coordinated and at times may conflict with activities and priorities identified by local governments. State agencies have not explained how their programs are funded, making it difficult for local governments to coordinate monitoring and restoration activities with State programs.

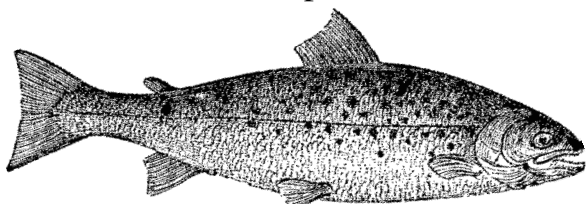
**Solution:** The Tributary Teams will arrange a meeting with local government representatives and State granting agencies to assure that grant applications coordinate with local programs. The Teams will request that the Chesapeake Bay Cabinet provide information on program funding and whether a Statewide strategic restoration funding plan has been developed.



**Problem #3:** The State's increased emphasis on having local governments use the Water Quality Revolving Loan Fund for FFY99 instead of cost share grants hurts local governments that have no basis for paying these loans back or that can borrow money at lower interest when factoring in administrative costs. Local governments that have submitted applications for grant projects are being directed to loan fund requests. Where local governments have the resources to pay back the loans, they appear to be penalized (receiving partial funding) for not having a dedicated funding source (e.g., advalorem tax) to do so. **Solution:** The Clearinghouse review for MDE's Water Quality Revolving Loan Fund for FFY99, is based on the annual Intended Use Plan (Clearinghouse # MD990809-0831). The Tributary Teams will invite a briefing from MDE explaining the Revolving Loan Program and Intended Use Plan and how projects are selected and prioritized.

**Problem #4:** Local governments normally build the State's cost share into their budget. Large increases were proposed for this program for the current FY budget, but were cut by state legislature. **Solution:** The Tributary Teams and Local Government officials could send joint or individual letters to the MDE and DNR Secretaries and the Governor indicating support for a higher funding level request for consideration during the next legislative session. Team members could follow up on this with their local delegations and with testimony during legislative hearings.

Several of these issues were discussed at a Local Government Contact Meeting held in September 1999 and at the Chesapeake Bay Cabinet Meeting held in October 1999. The workgroup will continue to work together through the coming year and develop an implementation plan and schedule for the recommendations presented.



*Currently, the Atlantic White Cedar is in critically low numbers. A Lower Western Shore grant will help restore a wetland with these beautiful trees.*

## Tributary Team Habitat Grants

In 1999, for the first time, the State approved \$100,000 in general funds to support Tributary Team Habitat Restoration projects. Coordinated by DNR's Watershed Restoration Division, the grants provided funds for cooperative projects between Teams, local governments, watershed organizations, community associations, Soil Conservation Districts and others.

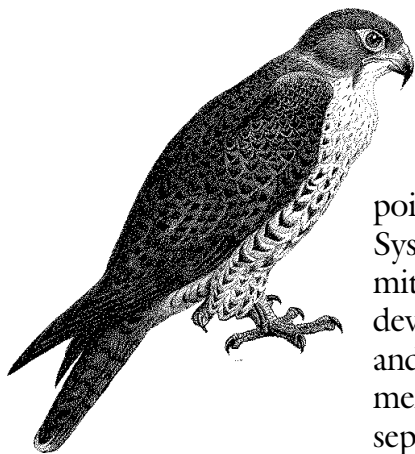
This year, the following projects were funded: habitat creation and restoration at Chino Farms (UES); North Harford High School Wetland Project (UWS); George's Creek stream restoration (UP); White Cedar reforestation, stormwater management/reforestation in Cape St. Claire, and shoreline erosion abatement project at Quiet Waters Park (LWS); and, oyster restoration and reef building (Choptank).



## On-Site Disposal Systems Task Force

Cumulative impacts of septic systems, or on-site sewage disposal systems (OSDS), on water quality and on Smart Growth initiatives has become a major concern in Maryland and for Tributary Team members. In 1998, the Middle Potomac Tributary Team became aware that the on-site sewage disposal system Code of Maryland Regulations (COMAR) were soon to be revised and submitted for public comment by the Maryland Department of the Environment. At the Middle Potomac Team's request, members of the Upper Western Shore, Patuxent and Middle Potomac Tributary Teams met with representatives of MDE, the Washington Suburban Sanitary Commission, and Montgomery County to discuss the forthcoming changes. The Teams wished to encourage the use of technologies that reduced nutrients while also hydraulically removing pathogenic waste water. Realizing that the scope of the surrounding issues was broad, they proposed the creation of a Task Force to the Governor's Chesapeake Bay Cabinet, who endorsed it in October 1998.

In February 1999, the Task Force convened, and met monthly through July. They reached consensus on their recommendation and submitted the final report, Reducing the Environmental Impacts from On-Site Sewage Disposal Systems. A Report by the OSDS Task Force, an Initiative of Maryland's Tributary Teams in August 1999, and reported their findings and recommendations to the Chesapeake Bay Cabinet on September 10, 1999.



The Governor subsequently appointed his "Septic System Advisory Committee," charged with developing legislative and regulatory recommendations to address septic system impacts



(with particular emphasis on Areas of Special Concern). This group relied considerably on the Task Force's recommendation in formulating their Executive and Legislative policies for OSDS management in Maryland.

## Cross-Team Public Outreach and Education Workgroup

The Tributary Teams, in a coordinated effort under the leadership of Liz Kalinowski, DNR's Public Communications Office Director, formed a Public Outreach and Education Cross-Team Workgroup to address large scale public outreach endeavors. This year's major public outreach endeavor was the production and publication of the document, "Fragile Handle With Care," a 34-page booklet that was included as an insert in a June Sunday edition of *The Baltimore Sun*. The booklet reached over 1,000,000 people in the Baltimore Metropolitan Area. The booklet, written in an easily read style, describes what individuals can do in their homes, yards, cars, boats and communities to reduce pollution entering Maryland's rivers and the Bay. In addition, the document was placed online on *The Baltimore Sun's* internet site, "SunSpot", reportedly with 7 million hits per month. A contest was also held to solicit feedback on the messages in the publication.

*The Sun*, provided design and layout, production, editing, distribution, classroom aides, online tie-in and promotion of the section. In addition over 7,500 additional copies were provided to each partner agency who participated and the booklet was distributed to over 400 metro area elementary schools with an accompanying teacher's guide.

For the Team members and State agency representatives who participated in the year long endeavor, and for those who were witness to it, *The Baltimore Sun* insert was a wonderful success. The product is still being requested by schools and citizens and has met with great praise. The Workgroup is now considering what their focus will be for their next project.

## Cross-Team Developed Lands and Point Source Workgroups

The Cross-Team Developed Lands and Point Source Workgroups were formed at the request of Secretary Jane Nishida during the December 10, 1997 Chesapeake Bay Cabinet Meeting. The Maryland Department of Environment hosts the multi-team, multi-agency Workgroup meetings. These Workgroups usually meet quarterly during the year. Interested Tributary Team members, State agencies, and invited guests comprise the make-up of the Workgroups.

The Cross-Team Workgroup forums have been very successful in providing an open and relaxed opportunity to discuss specific issues, recommendations, accomplishments, and priorities as well as offer an opportunity to understand and discuss regulatory programs that affect developed land and point sources. Participants from both Workgroups look forward to continuing the open dialogue in the coming years.

### Cross Team Developed Lands Workgroup

The Cross-Team Developed Lands Workgroup explores areas from innovative best management techniques to progressive changes in Maryland's regulatory process. Specific topics have included septic regulation

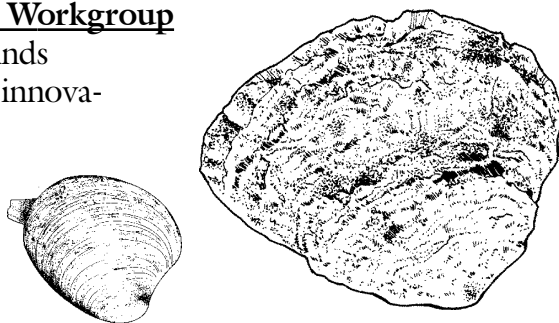


*Upper Western Shore Member Jo Owen (right) presents a framed copy of the "Fragile: Handle with Care" booklet to DNR Public Communications Director, Liz Kalinsowski.*

changes, the On-Site Disposal System Task Force, stormwater regulation changes, Maryland's Stormwater Design Manual, the Federal Phase II Rule, NPDES Stormwater Discharges, the Water Quality Improvement Act and its impacts on developed lands and urban development, an overview of MDE's water appropriation and use permits, Cross-Team Point Source Workgroup Updates, the urban BMP effectiveness study, an update on DNR's watershed model and urban BMP ratings, updated BMP tracking, priority funding areas for "Smart Growth," urban nutrient management, combined sewer overflows (CSO's) and infrastructure maintenance, stormwater retrofits and conversions, and alternative financing measures for stormwater.

### Cross-Team Point Source Workgroup

The Cross-Team Point Source Workgroup has been equally broad ranging in their discussions and, as a result of the information exchange and subsequent follow-up by the Upper Western Shore and Upper Eastern Shore Teams, the towns of Elkton and Chestertown signed BNR agreements in June and





July of 1999.

Many issues and concerns have been raised by the Team participants and were subsequently addressed through briefings or discussions including: BNR at small WWTPs, the nutrient cap and monitoring of the cap, allocations of cap loads for point sources, EPA's development of water quality criteria for nutrients, trading, inspection frequency of WWTPs, WWTP performance, review and compliance, phosphates in dishwashing detergents, the schedule of BNR upgrades at Patapsco WWTP, the status of Maryland's water quality standards, tributary model updates, the new Bay Partnership Agreement.

## Horse Pasture Management Workgroup

In January, Team members participated in the 3rd Annual Horse World Expo – an excellent opportunity for reaching the recreational horse owner. The center piece of the booth was the new pictorial exhibit “Maryland's Chesapeake Bay Is Horse Country.” Representatives of the Tributary Teams' Agricultural subcommittees from the seven western shore watersheds setup and staffed the exhibit. Over 25,000 individuals with an interest in horses attended this three-day event.

This outreach activity provided information to

these landowners on the technical assistance available through Soil Conservation Districts and Cooperative Extension Programs that can address horse pasture/manure management issues. Presentations relating to horse pasture/manure management were held in the University of Maryland Cooperative Extension seminar hall on both Saturday and Sunday of the event. Attendees of the event were very interested in learning more about pasture and manure management. The Horse World Expo was an excellent opportunity to meet with this segment of Maryland citizens and exchange ideas and information, maximizing limited public resources. The Tributary Teams' agricultural subcommittees plan to participate in the 4<sup>th</sup> Annual Horse World Expo.

Horse Pasture Management was identified by local agriculture groups as an area that needed to be addressed as part of the Tributary Strategies in the urbanizing tributaries. The tributaries that this encompasses are the Upper Western Shore, Patapsco/Back River, Patuxent, Lower Western Shore, Lower Potomac, Middle Potomac and the Upper Potomac.

The agricultural subcommittees of the Tributary Strategy Teams determined that given the trend of growth in an already large industry, pollution will increase due to overgrazing and manure disposal. Owners of farmettes often find handling and disposing of animal manure and bedding difficult.

Stabling horses on small pieces of property creates conditions for concentrated wastes. These animal wastes contain nitrogen and phosphorus which can pose a threat to water quality. Soil from eroding pastures and rainwater runoff from unmanaged animal wastes carry nutrients and sediment to tributaries and ultimately to the Bay. The Maryland Department of Agriculture has now funded a full-time outreach position for Montgomery and Anne Arundel Counties in part due to the urging of the Middle Potomac Team.



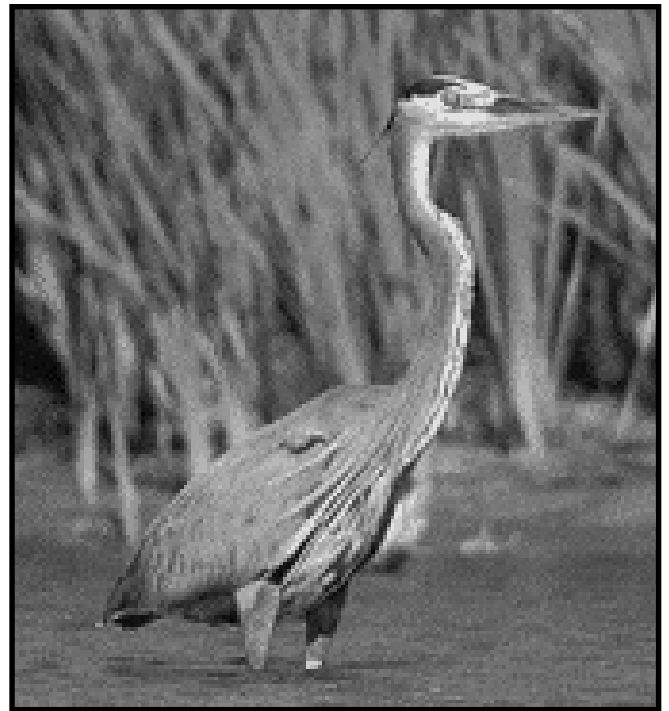
## Shore Erosion Task Force

Sedimentation and shore erosion is a significant problem throughout Maryland and its tributaries. Of the State's 4,360 miles of coastline, approximately 31%, over 1,350 miles, is currently experiencing some degree of erosion. Excess sedimentation, while not only causing economic losses, is a serious threat to the Bay's ecology and resiliency. When sediments become suspended in the water column, the particles block much-needed light for underwater grasses. This in turn has severe consequences on the bottom-feeding communities, or benthos. Accordingly, the Tributary Teams focused much of their attention over the past year on this issue, with the Lower Potomac Team placing erosion as their top priority.

During the 1999 Maryland Legislative Session, State Representatives passed Resolution 13 that created a Task Force for "the purpose of identifying shore erosion control needs, addressing causes and effects, assessing available resources, and making recommendations for a comprehensive plan of implementation." A representative from the Tributary Team Program attended the meetings through the fall. In December, the Task Force held six public hearings to listen to citizen comments regarding their recommendations. The Tributary Teams assisted in promoting the meetings, and several Team members attended. The Teams will monitor the Task Force's progress and continue efforts on this important issue.

## Public Drainage Task Force

In July 1998, Choptank Tributary Team members encouraged the Bay Cabinet to organize a Public Drainage Task Force. In February of 1999, Choptank Tributary Team members met with members of the Bay Workgroup, Public Drainage Association Managers, and State staff for a field tour and discussion to address concerns about the need to improve the maintenance and environmental management of the ditches. In response, the Bay Cabinet began to develop the Task Force and officially appointed representatives in July. Task



*Kayaking or canoeing out on the Bay's rivers and streams is always rewarding, especially when sighting a Blue Heron.*

Force members were appointed from approximately 23 constituency groups, including three Choptank and three Lower Eastern Shore Tributary Team members.

The mission of the Task Force is to identify the ways and means of protecting the well-being of people who depend on effective public drainage - farmers, residential property owners, highway users, and others - while at the same time attempting to protect and enhance the resources that are affected by the public ditches. The Task Force divided their work into three phases. Phase I is the objective fact finding portion, which is allotted to educational presentations on the following issues: the history, management, and regulation of public drainage ditches in Maryland; how drainage ditches function in relationship to water transport; buffers as interceptors of nutrients; the economic value of public drainage in Maryland; and the environmental consequences of public drainage. Phase II will address the negotiation and agreement of the best ways to amend public drainage taking into account environmental and maintenance needs. Phase III is when the Task Force will communicate their recommendations to the Governor's Bay Cabinet, expected in the summer of 2000.

# Tributary Team Reports

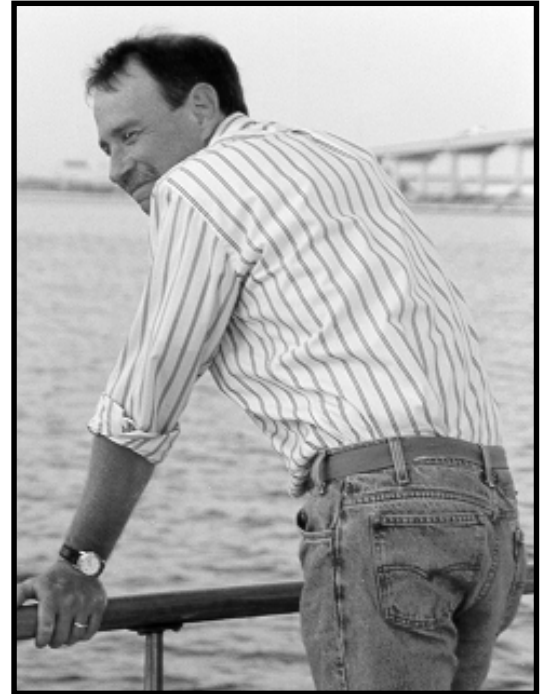
## Tributary Teams and the People Who Lead Them

The Tributary Strategy Teams have come of age. Gubernatorially appointed in 1995 to bring local focus and perspectives, in a consolidated effort, to the state's 40% nutrient reduction effort, they are operating as effective and active participants in the shaping of Maryland's water and land environment. This summer will wrap up five full years of work for the Tributary Teams and it is an impressive list of achievements that they leave in their wake. The success of the Tributary Teams, in helping to raise the awareness of governments, the public, businesses and farmers, or to change policies, implement best management practices, remove road blocks and create options for creative problem solving, is due entirely to the people who make up the Teams.

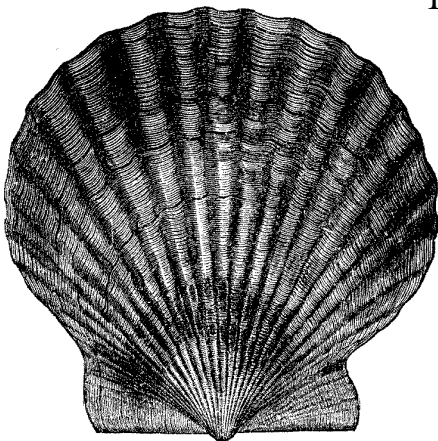
All the participants of the Tributary Teams are important, and all the participants are to be commended for their hard work. They include people from farms, businesses, environmental organizations, activists, governments, and elected officials. The following pages describe their work. They include Team accomplishments for 1999 and their goals for 2000.

At the Annual Meeting in January 1999, special recognition went to the following people for their outstanding gift of time and commitment to their Team and the environment. **Dave**

**Harris**, for his contribution to the Team's search for a solution to the maintenance of PDAs to reduce nutrient loading to the waterways; **Mike Moore**, for organizing two workshops for landowners to promote the Conservation Reserve Enhancement Program; **Phil Hager**, for his work in organizing the Teams's "How Human Activities Affect the Chesapeake Bay" workshop; **Meosotis Curtis**, for her work in drafting the updated Patuxent Policy Plan, and her leadership in the Patuxent Reservoirs watershed workgroup; **Peg Burroughs**, for her work in launching the Herring Bay initiative, including the Herring Bay wade-in; **George Wilmot**, for his work in promoting stream monitoring and riparian buffers in the Lower Potomac, and for his dedication as Vice Chair in representing the Lower Potomac at key meetings and initiatives; **Cy Jones**, for his continued involvement and support in clarifying and resolving point source technical and equity issues of interest to all Tributary Teams; **Jack Anderson**, for his work in promoting a stormwater utility for the Baltimore metropolitan area; **Jo Owen**, for her work in promoting the bay friendly, *Baltimore Sun*, Garden Calendar, newspaper projects, and public awareness of fertilizer and drinking water issues; **Craig Hartsock**, for his leadership in organizing the Erosion and Sediment Control Workshop, and for his dedication and perfect meeting attendance in traveling across the State's largest tributary basin.



*Bill Stack, Patapsco/Back Tributary Team, was honored at the 1999 Annual Meeting with the "Bernie Fowler Award" as the Program's Team member of the year.*





# Upper Western Shore

## Watershed Heroes

### JO OWEN

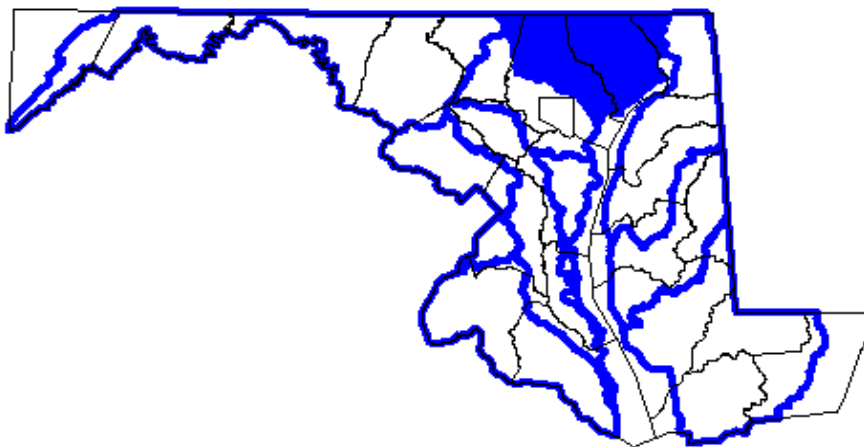
#### Upper Western Shore

Jo is a long-time community and environmental activist. She serves on the Greater Timonium Community Council; a steering committee member of the Watershed Protection Coalition; a member of Baltimore City's Friends of the Watershed; and is Vice-Chair of the Team. She is a master gardener as well as a garden consultant of the Federated Garden Clubs of Maryland. Jo's a Chicago native who came to Maryland after serving as a Navy Wave, where she taught range estimation on a gunnery range. Jo's interest in protecting drinking water reservoirs led to her involvement with the Teams. As a Team Member, Jo has been instrumental in developing the "Bay Friendly" gardening calendar, the *Baltimore Sun* newspaper project and educating homeowners on how their individual actions affect water quality.

### CHARLIE CONKLIN

#### Gunpowder River

Charlie began his second career after noticing a degraded stream running through his property. He is actively involved in several organizations focused on protecting Maryland's environment. Besides being the Team Chair, he is Chairman of the public involvement team of the Gunpowder Watershed Project, Vice-Chair of the Baltimore County Forestry Board, Vice-Chair of the Coastal and Watershed Resource Advisory Committee, on the board of the Alliance of the Chesapeake Bay, a supporter of the Gunpowder River Rural Legacy Area, and in his "spare time" organizes stream clean-ups, tree plantings and trail maintenance projects.



## About the Team

This section highlights the accomplishments, recommendations and goals of the Upper Western Shore Tributary Team. The Team has been working in the watershed since 1995.

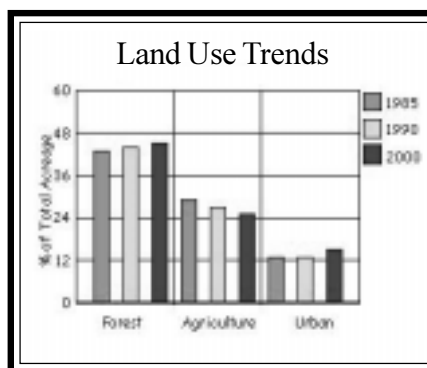
Over this time, they have remained a stable presence working to promote the conservation and restoration of the watershed's natural resources. Under the guidance of Team Chair, Charlie Conklin and Vice Chair, Jo Owen and working through focused project groups, the Team continues to achieve many of its goals, from playing an instrumental role in the upgrade agreements by area waste water treatment plants to buffering stream corridors.

## Accomplishments

### Stormwater Management

A grant was awarded to the Upper Western Shore and Patapsco/Back River Teams, on behalf of the Baltimore Metropolitan Council and the Center for Watershed Protection, to assess the performance of stormwater management ponds and other urban best management practices in the Baltimore Metropolitan area. A report prepared by

William Stack, Chair of the Upper Western Shore Developed Lands Workgroup, identifies issues raised during this assessment. For a further description, see page 6 under the "Restoring the Bay" section of this report, titled *Stormwater Management*.



tion, see page 6 under the "Restoring the Bay" section of this report, titled *Stormwater Management*.

### Otter Point Creek "Wade-In"

At the second annual Upper Western Shore Team "Wade-In" the Team was joined by County

Executive James Harkins and waded into the Creek to a depth of 12.5 inches, improving on last year's mark of 7.5 inches. Led by Team Member, Glen Hedelson and with the help of the Chesapeake Bay National Estuarine Research staff, the attendees were treated to a full day of family-oriented and educational activities.

### **Issue Forums**

On April 26, 1999, the Agricultural Work group, chaired by Gary Davis, hosted "Agriculture Night" at Swan Harbor Farm on the Bay near Havre de Grace. Speakers updated the team on agricultural issues including an update on the tracking of agricultural BMPs. Also, Tom Adams, owner of Creswell Lime gave a demonstration of how soil samples are pulled and correlated with a GPS system to digitally map a field down to two square meter grids.

On March 22, 1999, the Developed Lands workgroup, chaired by Bill Stack, hosted a public forum to identify progress, barriers and future steps in the area of developed lands. Speakers included Thomas Miller from the University of Maryland Cooperative Extension, Ron Gardner from Maryland Department of Natural Resources, Tom Simpson from the University of Maryland, Ken Pensyl from the Maryland Department of the Environment, and the County Representatives for the Upper Western Shore watershed.

On April 24, 1999 a forum was held at Harford Glen Environmental Center. The goal of this public forum was to identify progress, barriers and future steps in the areas of Stream ReLeaf and resource protection. Chaired by Janmichael S. Graine, this forum featured Josh Sandt, Anne Hairston-Strang, Mike Herrmann, and Rob Northrop from MD Department of Natural Resources, Scott English from the Department of Defense, and the County Representatives for the watershed.



On June 28, 1999, the Atlas Workgroup, Chaired by Kent Barnes hosted a public forum on Smart Growth.

### **Team Members**

Charlie Conklin, Chair, Gunpowder Valley Conservancy  
Jo Owen, Vice-Chair, Watershed Protection Coalition  
Jack Anderson, Baltimore Metropolitan Council  
Jim Bailey, Aberdeen Proving Ground  
Kent Barnes, Towson State University  
Karen Blake, Save Our Streams  
Keith Bowers, Biohabitats, Inc.  
Cliff Bienko, Harford Soil Conservation District  
Gary Davis, Harford Soil Conservation District  
Louis Ensor, Baltimore County Farm Bureau  
Philip A. Geising, Cecil Co. Dept. of Planning and Zoning  
Janmichael S. Graine, Aberdeen Proving Ground  
Richard Hall, MD Office of Planning  
Robert Halmon, Harford County Extension Service  
Glen Hedelson, Bel Air High School  
Greg Kappler, Baltimore Gas & Electric Company  
Stan Kollar, Harford County Community College  
Kevin McBride, Citizen  
Lee McDaniel, Indian Springs Farm  
Steve Nelson, Carroll Co. Bureau of Environmental Svcs.  
Robert Northrup, MD Department of Natural Resources  
Charles (Ed) Null Jr., Carroll Soil Conservation District  
Donald Outen, Baltimore County DEPRM  
Bob Palmer, Citizen  
Skip Pieper, Farmer  
Pat Pudelkewicz, Harford Co. Planning and Zoning  
Bill Stack, Baltimore City Dept. of Public Works  
Christopher Schlehr, Town of Bel Air, Dept. of Public Works  
Steve Smith, Citizen  
Steve Witt, Citizen

### **Participants**

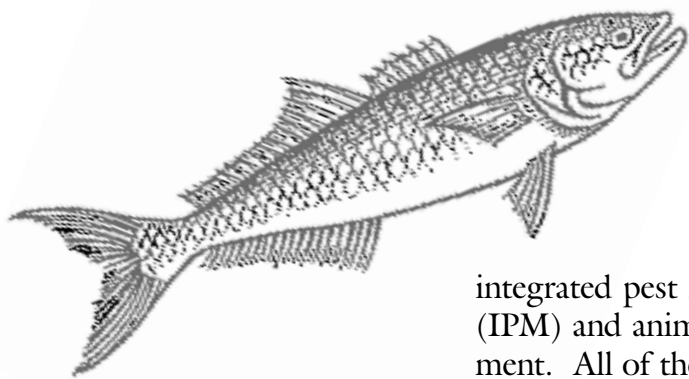
Deborah Bowers, Citizen  
Eva Delp-Cole, Baltimore County Farm Bureau  
Paul Dubois, Citizen  
Mark Ferguson, Natural Resources Conservation Service  
Kenneth Hranicky, Maryland Office of Planning  
Lisa Hoerger, Critical Areas  
Catherine Kane, Harford County Public Works  
Mary Ann Lechowicz, Citizen  
Livingston Marshall, Morgan State University  
Jane Wolfson, Towson University

### **Team Coordinator**

Matt Fleming

At Towson University, speakers from the Maryland Office of Planning, Richard Hall and Kenneth Hranicky; Towson University, Bill Smit; and the Upper Western Shore County Representatives, Donald Outen, Patricia Pudelkewicz, and Steve Nelson used this opportunity to identify areas where the Team could participate in Smart Growth themes.





### **Agriculture**

The Harford Agriculture Work Group partnered with the Harford County Farm Bureau and the MD Cooperative Extension Service to co-host the Farm Visitation Day event in Harford County. The event was held on Sunday, June 27. Two Farms were highlighted: the Holloway Farm in Darlington in the Lower Susquehanna Watershed, and the Waffle Hill Farm owned by Larson Sayre and family in the Deer Creek Watershed.

At the Holloway Farm, the Harford SCD set up a display highlighting BMPs installed on the farm to reduce soil erosion and control runoff. In addition, Save Our Streams, in partnership with Glen Hedelson of Bel Air High School, conducted a stream assessment and used the samples that they found as part of their display. The Team set up a display highlighting the efforts to reduce nutrients on farms and with the general public.

At Waffle Hill Farm - Larson Syre gave hay rides through his cow operation and calf rotational grazing operation. During the tours he pointed out his many conservation practices such as remote water's stream crossing,

integrated pest management (IPM) and animal waste management. All of these BMPs help to reduce nutrients entering State waters by restricting cattle access to streams and storing manure so that it can be spread at optimum crop uptake stages. Approximately 300-400 people attended each event.

### **Outreach and Education**

Members of the Team and DNR staff made presentations to the Harford County Community College on March 9, 1999 and the Baltimore County Executive and Council on July 27, 1999. The purpose of the presentations were to update the respective counties on the progress and challenges of the "40% nutrient reduction" effort.

Members of the Team's Point Source Workgroup presented the benefits of biological nutrient removal (BNR) at the quarterly General's Briefing at Aberdeen Proving Ground (APG). The main focus was the status of the privatization of the APG wastewater treatment plant.

Jo Owen, Vice-Chair of the Upper West-

ern Shore Team, developed a slide presentation for the Federated Gardner Clubs of Maryland (FGCM) Landscape and Design Council, called "Landscaping for Clean Water Bodies" to be used in educational outreach to garden clubs in Maryland. As the FGCM Judges Council Chairman, Jo Owen promotes the use of native plants in flower shows as an educational tool for the public. Jo Owen also presented the Master Gardeners' program "Who Polluted the Potomac", to a third grade class at Warren Elementary School in Baltimore County.

### **Point Source**

During 1999, the Point Source Subcommittee continued to follow the progress of the implementation of Biological Nutrient Removal (BNR) at the wastewater treatment plants at Harve de Grace and Aberdeen Proving Grounds. A decision regarding the privatization of the waste water treatment plants at APG has delayed the implementation of BNR. A letter was written to



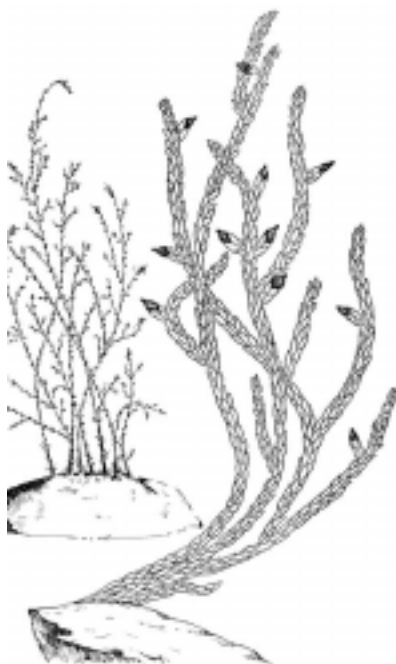
*Team member Glen Hedelson, partnering with Save Our Streams, illustrating the connection between the land use practices and aquatic health during the Harford County Farm Visitation Day.*

the Deputy Under Secretary of Defense, with copies to the congressional delegation, requesting timely enactment of the privatization process by the Army so that APG could meet their NPDES timetable for nutrient removal. The privatization contract was awarded to the City of Aberdeen at the end of October 1999. In the new year the subcommittee will contact the City to ensure the issue of the BNR will be addressed.

The subcommittee members participated in the Point Source Cross-Team Workgroup at the Maryland Department of the Environment throughout 1999.

## Recommendations

The Upper Western Shore Tributary Team is in transition between its initial role to reduce nutrients and its expanded role to support and promote actions and policies to ensure a healthy watershed with abundant and diverse living resources.” This



Upper Western Shore



Team members assist the Baltimore County Kiwanis Club in planting a 3-acre site along Dulaney Branch, a tributary to the Loch Raven Reservoir.

new role is in support of the renewed Chesapeake Bay Agreement.

The priority areas for the Upper Western Shore Team will be to: (1) facilitate and communicate the goals and initiatives of the Chesapeake Bay Agreement initiatives; (2) coordinate resulting programs among all of the players, from government agencies to non-government organizations; and (3) monitor and track actions specific to the Upper Western Shore Watershed.

Criteria for action on Team initiatives will be to answer the following: The Upper Western Shore Team is in the best position to implement the initiative or, the Upper Western Shore Team is the only organization that can take on the given task. To address the challenges of this expanded role, the Team commits to: (1) revise its By-Laws to encompass its expanded role, reflected in the new Bay Agree-

ment; (2) develop a Team membership and leadership succession plan to insure the accomplishment of priority projects; and (3) implement the specific projects and actions identified by the six Team workgroups.

## Priorities

### Point Sources

Continue to follow progress/monitor implementation of BNR at the Aberdeen Proving Ground and Havre de Grace wastewater treatment plants. Other work activities will include: providing support for the North Harford High School wetland project, participating in the Cross-Team Point Source Workgroup; and investigating the provision of BNR for the Hampstead wastewater treatment plant.

### Agriculture

The Tracking Workgroup will continue working with the State's Tracking Workgroup to determine what input the Tribu-



tary practices.

### **Resource Protection**

In late February 2000, the Upper Western Shore Team will host an Information Exchange designed to gauge the status of Maryland's pledge to reforest 600 miles of streams and rivers by 2010. The exchange will focus on such topics as the impact of legislation and regulations that mandate or encourage the establishment of riparian forest buffers, materials and maintenance issues, outreach programs and other issues related to stream-side buffer plantings.

In mid April 2000, the Upper Western Shore Team, in partnership with the Baltimore County Kiwanis Club, will support the second planting at Dulaney Branch. Last year the Team helped to plant 350 potted trees and 750 seedlings along a 3-acre site along this tributary to the Loch Raven Reservoir.

### **Otter Point Creek**

The Upper Western Shore Tributary Team and Harford Technical High School, in partnership with the Watershed Restoration Divi-

sion of DNR, have purchased 7,000 seedlings to be used in riparian plantings in the Upper Western Shore. The trees, previously planted in one gallon containers, will be planted along streams this fall and in the spring and fall of next year. Students and staff at Harford Technical High School,

along with volunteers from the community, will plant the seedlings to establish stream buffers in the Upper Western Shore. The Winters Run watershed has been targeted for planting in 1999/2000. Containerized stock are more hardy than seedlings and will allow planting to take place in both the spring and fall. Already, several Harford County landowners interested in riparian plantings have contacted the Department of Natural Resources through the Landowner Stewardship Referral Service.

This project will make free trees available to these small and mid-size landowners, who may not qualify for Conservation Reserve Enhancement Program.

### **Watershed Atlas**

With assistance of the Maryland Office of Planning and Towson University, the workgroup will seek funding to organize a



*Harford Technical High School student tends to a "Grow-Out Station." Over 7,000 seedlings will be used to target stream side buffer plantings in the Winters Run watershed.*

paper version of the Upper Western Shore Atlas into an on-line tool. The paper version contains maps and text that focus on resource protection, trends, threats and other issues as they relate to the watershed. The on-line version will also outline avenues for citizen involvement in ongoing activities.

### **Outreach and Education**

The Citizen Outreach and Education Workgroup's project emphasis for 2000 will include working with the Cross-Team Public Education and Outreach Workgroup on a follow up to the successful "Fragile - Handle with Care" *Sun* Newspaper insert. The Team will also participate in the Gunpowder River Festival and work to develop a poster on Bay Friendly Lawn Care to be displayed at home and garden centers.



# Patapsco/Back Rivers

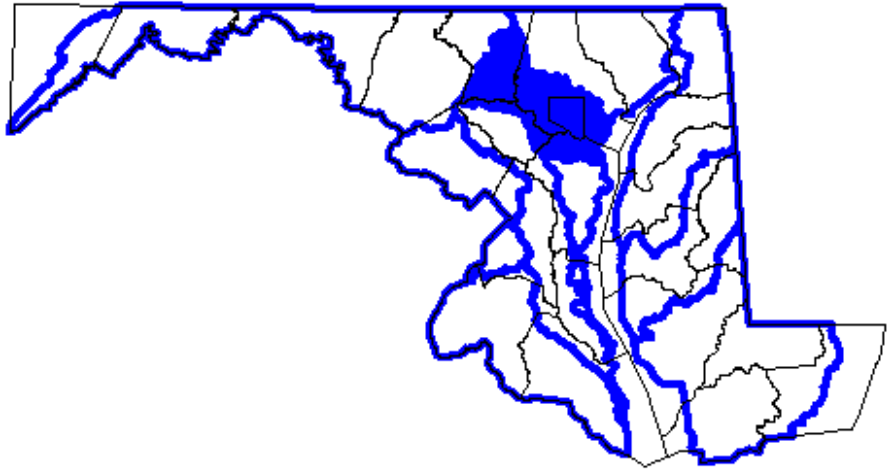
## Watershed Heroes

### JOHN MARTIN Back River

John is a 12-year veteran with Baltimore's Department of Public Works, where his work focuses on wastewater treatment plant operations. In this capacity, he monitors plant performance, reviews regulations, and participates in many special projects such as tracking water quality in Back River over the past several years and implementing the new sample tracking and data management system in the City's two wastewater laboratories. John has been an appointed member of the Team since 1998 and participates on the point source workgroup. He has made noteworthy contributions to the Team's overall objectives and coordinated a tour of the Back River Wastewater Treatment Plant for his Team. He is spearheading the Back River Plant's participation in a seedling grow-out station that will supply trees to non-profit housing and community development groups in the Baltimore area.

### LEE WALKER-OXENHAM Bonnie Branch Stream

Lee is the chair of the Team's Forest Buffer Workgroup. She is also the chair of the Howard County Conservation Committee for the Sierra Club and active in the protection and restoration of the Bonnie Branch Stream. Since the 1960s, Lee has been on the front line of the environmental movement and her work is known throughout the region. Most recently Lee was featured along with Vivian Newman, of the Maryland Sierra Club, on an MPT special dealing with non-point pollution sources such as highway de-icers.



## About the Team

The Patapsco River has a very diverse shoreline, ranging from vast open space and greenways to industrial areas, as it meanders from its head waters to the Baltimore Inner Harbor.

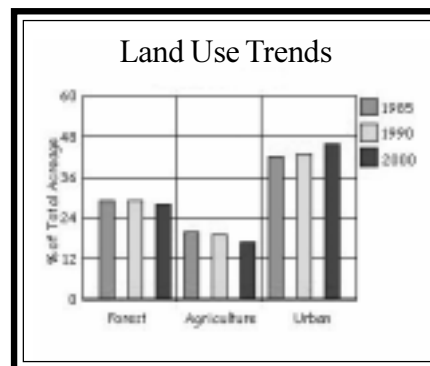
In 1999 the Patapsco-Back River Tributary Team made significant progress as it worked toward reduced nutrient loads and improved resource management in the Basin. The Team meets one evening a month and has an open door policy. All interested persons and organizations are welcome to attend and are encouraged to participate. Key workgroups include outreach, developed lands, point source, agriculture, forest and resource management.

## Accomplishments

### Outreach and Education

The Team worked in several ways to educate itself as well as others about issues in the watershed. In dealing with outreach, Team members participated on the cross-Team outreach group which created the highly successful *Baltimore Sun* insert "Fragile: Handle with Care." Also, the Team held its first annual "Baltimore Harbor Secchi Dip-In" and established closer working relationships with organizations that conduct environmental programs in Baltimore Harbor (e.g., Living Classrooms, Maryland Science Center, National Aquarium in Baltimore, and the Chesapeake Bay Program.)

As far as educating both members and the public, the Team



sponsored several briefings throughout the watershed. Team Chair Jack Anderson participated in Tributary Strategy briefings for the Senate Economic and Environmental Affairs Committee, the House Environmental Matters Committee, County Executives and County Councils. In each of these briefings, Jack emphasized issues and accomplishments in the Patapsco-Back River Basin.

The Team also facilitated a briefing and tour of the proposed Patapsco Greenway for members of the Howard County Council, supported the Carroll Soil Conservation District's briefing and tour of water quality practices and issues, learned about operations at Back River Waste Water Treatment Plant through a briefing and site visit, received briefings by representatives of both sides of the "Site 104" dredged material disposal issue, and collaborated with MDE in sponsoring a public meeting on the development of TMDLs in the Patapsco-Back River Basin and received a briefing from DNR on Maryland's Water Quality Report which describes the condition of waters within the Basin.

## Developed Lands

No other tributary basin has as much developed land as the Patapsco-Back River Basin. The Team continued to devote considerable effort on the nutrient reduction and other water quality improvement issues related to urban and suburban development, specifically related to stormwater management. For a further description, please see page 6 under the "Restoring the Bay" section of this report, titled *Stormwater Management*.

## Watershed and Stormwater Management Finance

The Team continued to work with local governments, the Baltimore Metropolitan Council (BMC) and state agencies in seeking adequate funding for local watershed and stormwater management programs. The list of mandated requirements imposed upon local governments by the state and federal government has grown dramatically over the last two decades. The list includes:

- new stormwater regulatory programs

### Team Members

Jack Anderson, Chair, Baltimore Metropolitan Council  
 Guy Hager, Vice-Chair, Parks and People Foundation  
 John Botts, Aquatic Sciences Consulting  
 Jackie Carrera, Parks and People Foundation  
 Peter Conrad, Baltimore City Planning Department  
 Kirk Engle, Carroll County Health Department  
 Fran Flanigan, Alliance for the Chesapeake Bay  
 Elinor Gawel, Anne Arundel Co. Planning & Code Enforc.  
 Dick Gibbs, Irvine Nature Center  
 Donald Helm, Morgan State University  
 Rick Hersey, Herring Run Watershed Association  
 Keith Lackie, Howard County Department of Planning  
 Stuart Leister, Carroll County Soil Conservation District  
 John Martin, Baltimore City Department of Public Works  
 Bill Metcalf, Agriculture  
 Ed Null, Carroll County Soil Conservation District  
 Don Outen, Baltimore Co. Dept. of Environment. Protect.  
 Eugene Reynolds, Agricultural Products GP  
 Jim Slater, Carroll County Department of Public Works  
 Bill Stack, Baltimore City Department of Public Works  
 Richard Starr, US Army Corps of Engineers  
 Barbara Taylor-Suit, Save Our Streams  
 Paryse Turgeon, MD Department of the Environment  
 Lee Walker-Oxenham, Citizen  
 Raj Williams, Williams Associates  
 Robert Zieham, Howard County Soil Conservation District

### Participants

George Harman, Citizen  
 Catherine Rappe, MD Dept. of Natural Resources  
 Cheryl Simmons, Howard County Soil Conservation Dist.

### Team Coordinator

Vince O. Leggett

- new approaches to stormwater management (expanding from quantity control to quality control, watershed management and stream restoration)
- serious issues relating to infrastructure maintenance (from ongoing maintenance to systematic repair and replacement)

As a result, the stormwater infrastructure has grown substantially over the last twenty years and will continue to grow. Many facilities are approaching the end of their useful lives. Present State and local funding for watershed and stormwater management is totally inadequate. The Team is working with the Baltimore Metropolitan Council's Environmental Finance Alternatives Committee to develop additional resources for local governments and for a strengthened State/local funding partnership.



## **Grant Funding for Urban Programs**

Representatives from the Patapsco-Back River, Upper Western Shore and Middle Potomac Teams formed a workgroup to address inadequate funding for urban programs. The workgroup believes that the State should substantially increase the grants available to local governments. (Currently, state agencies are securing the lion's share of available funding.) More local grant funding is needed to support local watershed restoration initiatives. An unfair burden is being placed on local governments as the state moves toward tightened Bay goals, and adds more requirements for TMDL and NPDES municipal stormwater permits without increasing state resources available to local governments. These issues were discussed at the October Bay Cabinet meeting. The workgroup intends to develop an implementation plan and recommendations over the next year.

## **Baltimore County Stream Classification Study**

This three-part effort, made possible by Clean Water Act Section 319 funds and supported by the Team, was designed to improve stream management and restoration. In part one, available stream assessment data using the Rosgen method were assembled to develop methodolo-

gies and data. In part two, field data were collected to determine conditions important for estimating streambank erosion rates. In phase three, completed stream restoration projects were assessed to determine the success of each site in achieving restoration goals.

## **OSDS Task Force**

Team members served on the On-Site Disposal Systems Task Force which developed recommendations for improving septic system performance throughout the State.

## **Low Impact Development**

The Team continued to follow up on the recommendations developed during its successful 1998 workshop, "Designing Livable Communities and Healthier Watersheds" in which the Site Planning Roundtable's "Consensus Agreement on Model Development Principles to Protect Our Streams, Lakes and Wetlands" was presented by the Center for Watershed Protection. That Agreement outlined 22 model development principles ranging from minimizing street pavement to reducing minimum parking requirements.

The Patapsco/Back and Upper Western Shore Teams requested that the Consulting Engineers Council of Maryland review the principles and provide their



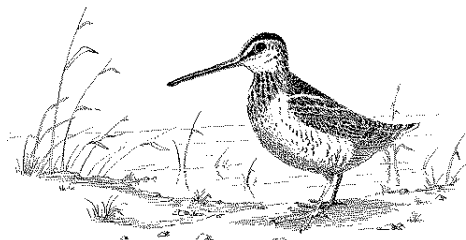
*Members and watershed residents examine the Team's first Secchi Disk reading in Baltimore Harbor.*

advice, which is summarized in the Cross-Team Section of this report.

## **Forest and Resource Management**

The Forest and Resource Management Workgroup received briefings on Maryland's Stream ReLeaf program and on available forest assessment methodologies (e.g., Baltimore County DEPRM, DNR). The Workgroup conducted an inventory of the Forest Conservation Programs of each local government within the Basin. In 2000 the Team intends to sponsor a workshop on Forest Conservation Programs within the Basin with the ultimate goal of enhancing existing programs.

The Team is investigating the feasibility of establishing a small tree nursery within the Basin in a high visibility area. The goals of this project are to visibly demonstrate the role and importance of trees and forest cover within the Basin, to provide tree stock for use by non-profit housing and community organizations, and to expand our outreach. A business plan for the project will be completed early in 2000.



*Patapsco/Back Rivers*

Another major goal is to establish improved site-specific analysis of resources, problems and opportunities within the Basin through GIS and other techniques.

### Agriculture

The Team received updates on issues facing the agricultural community in the Basin and supported Carroll County's Farm Tour sponsored by the Carroll Soil Conservation District. Agricultural land preservation is one of the major issues in the Basin.

### Point Sources

The Team received a briefing and tour of the Back River Waste Water Treatment Plant and discussed nutrient reduction issues relating to wastewater treatment plants in the Basin. The Workgroup initiated research into nutrient trading options.

## Recommendations & Priorities

### Watershed and Stormwater Finance

Inadequate funding for watershed and stormwater manage-

ment at the local level is the biggest challenge standing in the way of improved water quality and resource management in the Basin. A new partnership is needed between the State and local governments to adequately fund watershed and stormwater management programs.

As such, the Team will continue to work with State agencies and BMC's Environmental Finance Alternatives Committee to pursue adequate funding for watershed and stormwater management. Accordingly, the Team will continue to work for increased grant funding for a variety of local resource programs.

### Chesapeake Bay Agreement

The Team will review the current draft of the new Bay Agreement, and will support and promote the signing and implementation of a strengthened new agreement.

### Outreach

The Team plans to facilitate the second annual Baltimore Harbor

Secchi Dip-In, while involving additional organizations and expanding the event to other areas in the Basin. Other goals include strengthening the Team's linkages with watershed groups throughout the Basin and with organizations that conduct environmental programs in and around Baltimore Harbor (e.g., Living Classrooms Foundation, National Aquarium in Baltimore, Maryland Science Center, Chesapeake Bay Foundation, and Southside Academy of Environmental Science in Cherry Hill). Increasing the Team's minority outreach efforts such as those developed through the Blacks of the Chesapeake Foundation will also be a focus.

### Smart Growth

The Team will examine Smart Growth, Rural Legacy, conservation/preservation, and education programs within the Basin and work to integrate and coordinate them.

### Forest and Resource Management

The Team will hold a forum on forest conservation and complete a business plan for a tree nursery in the Basin.

### Communication and Coordination

The Team will find ways to increase communication about the role and accomplishments of all organizations (local, State and private) that are working to improve water quality and resources in the Basin. The Team's role will be to facilitate coordination wherever possible.



*Outreach to Baltimore's community is a top priority for the Team. Here, Bill Stack (left) helps residents find their watershed address and shows how their actions affect their own backyard.*

# Lower Western Shore

## Watershed Heroes

### PEG BURROUGHS

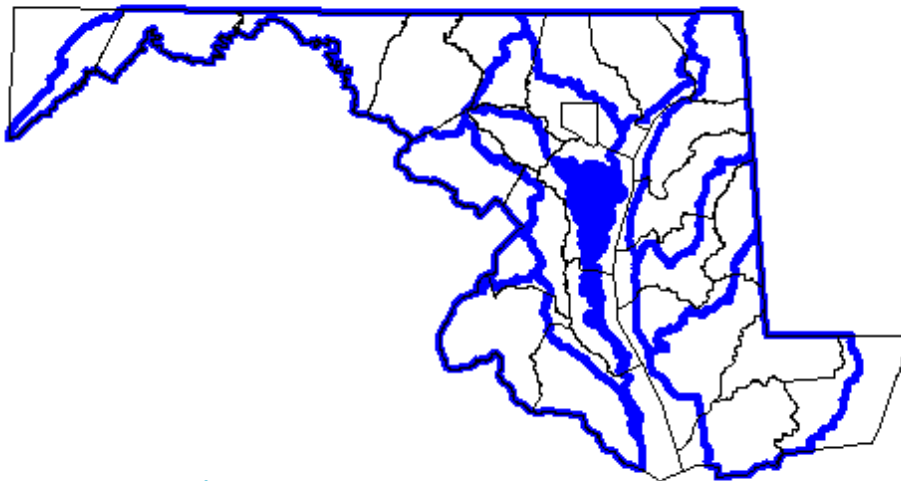
#### Herring Bay

A native of Anne Arundel, Peg began her love of and commitment to both Maryland and the Herring Bay watershed over 30 years ago. Statewide, Peg was a past President of Save Our Streams and the Chesapeake Environmental Protection Association. In the South County region, Peg works tirelessly in a wide variety of activities. She helped organize the West River Federation, assisted in the Herring Bay Watershed Assessment along with Save Our Streams and the LWS Team, and is a respected leader in the Herring Bay community. Peg works with conviction to support environmentally friendly ground-water, boating, and marina practices.

### JOAN WILLEY

#### Anne Arundel County

Joan is a true environmental and community leader, not only in the county, but indeed nationwide. Joan has lived in Anne Arundel for almost 30 years, and during that time helped found the Anne Arundel Group of the Sierra Club, is the current Chair of its Political Committee, and has been a strong advocate of environmentally sound planning and zoning approaches. Statewide, Joan is a past Chair of the League of Conservation Voters and Chair of the Maryland Sierra Club Executive Committee. Nationwide, she is a member of the National Political Committee of the Sierra Club. Indeed, Joan redefines the boundaries of what a "watershed" truly is.



## About the Team

Springboarding from last year's successful efforts on the sub-watershed level, the Team took another step to develop and support local watershed organizations. Members felt that by focusing their scope, area residents would feel more a part of their watersheds and subsequently be more inclined to ensure its environmental health and resilience.

The first step was to reenergize the Federation of South River Associations, who in the early 1990s had successfully abated development projects threatening critical areas within the watershed. The second task was to continue the success of the Friends of College Creek by incorporating the other creeks in the Annapolis

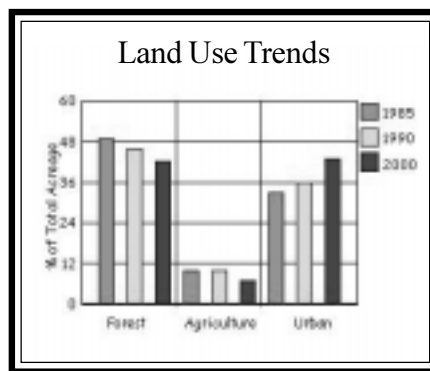
area through outreach projects and education.

In addition to watershed organizations, the Team also identified and promoted a handful of policies imperative to the Lower Western Shore basin's health: air deposition, failing septic systems, marina and boat owner best management practices, and homeowner education of nutrient reducing practices.

As a testament to the energy of the Lower Western Shore Team, every objective identified in the

previous year was successfully completed, often exceeding initial expectations. Through their efforts, the Team set a high standard in continuing their commitment to

restoring each local waterway to a healthy, resilient ecosystem.





# Accomplishments

## Local Watershed Organizations

### South River Federation

In the early 1990s, the Federation of South River Associations (FSRA) was an influential citizens' organization promoting environmentally sound development approaches and implementing demonstration projects. Over time, however, the FSRA slowly became dormant. Late in 1998, the Lower Western Shore Team decided the South River was a local resource to be treasured and made the reestablishment of the FSRA its top priority.

To identify and solidify resident support, the Team held several meetings during Spring 1999 with area stakeholders, including the Sierra Club, Save Our Streams (SOS), DNR's Clean Marina Initiative, and Anne Arundel County's Office of Planning and Code Enforcement (PACE). After a lot of hard work and commitment, the first meeting of the FSRA was held in April. Throughout the summer, bylaws were approved, a slate of officers and Board of Directors were elected, and the official name was changed to the South River Federation (SRF).

Once established, the SRF exceeded all preliminary expectations. Well over 30 members attend monthly meetings, and the four workgroups meet monthly outside of the SRF meetings. Finally, several implementation projects were planned and completed over the summer and fall; including a half-dozen shore grass plantings, three submerged aquatic vegetation plantings, and a complete watershed assessment with SOS. Lastly, the SRF was also awarded Tributary Team grant funds for a shore erosion control project at Quiet Waters Park.

In the future, the Lower Western Shore Team will slowly pull away from the SRF to pursue other watershed organization development projects. Yet, several exciting projects are being planned by the SRF, including: a reforestation identification plan, tree plantings, several restoration projects, and continuing monitoring of policies and projects which would adversely affect the health and diversity of the South River watershed.

### Team Members

Joan Willey, Chair, Citizen  
Steuart Chaney, Vice-Chair, Herrington Harbor Marina  
Earl Bradley, Citizen  
David Brownlee, Calvert County Office of Planning  
Peg Burroughs, Chesapeake Environmental Association  
John Colhoun, Farmer  
David Correll, Smithsonian Environ. Research Center  
Ginger Ellis, Anne Arundel Co. Planning & Code Enforce.  
John Flood, Citizen  
Catherine Ford, Citizen  
Beth Fuller-Valentine, MD Dept. of Natural Resources  
Louis Gardner, Business  
Lillian Griffith, Anne Arundel Co. Soil Conservation Dist.  
Joseph Haamid, Natural Resource Conservation Service  
Bud Jenkins, Citizen  
Tina Lorenzen, US Naval Academy  
Marcia Patrick, City of Annapolis  
Herb Reed, Cooperative Extension Service  
Jim Stone, Business  
Keith Underwood, Business  
Herbert Wayson, Maryland Farm Bureau

### Participants

Linda Andreason, Citizen  
Catherine Frate, Citizen  
Carol Jelich, Master Gardner  
Terry Lehr, Save Our Streams  
Drew Koslow, South River Federation  
Janis Markusic, Anne Arundel Co. Plan. & Code Enforc.  
Marguerite Whilden, Whitehall Bay Institute

### Team Coordinator

Sean McGuire

### Friends of Spa Creek

Stemming from their past successes in the College Creek watershed, members decided to branch out to the other creeks within Annapolis. After identifying local stakeholders, members recognized viable projects within Spa Creek. In partnership with the Chesapeake Bay Foundation (CBF), the Friends of College Creek assisted with a restoration project on Spa Creek and used the event as a springboard to plan for a stream assessment event.

Residents, BaySavers, marina operators, and other stakeholders within Spa Creek were identified and contacted regarding the stream assessment. After months of planning, a "Walk-About" was held on Saturday, June 19, with over 30 residents, local officials, and the Mayor of Annapolis in attendance.

Working with Save Our Streams, 26 “turfs” were identified and assessed. The Friends of College and Spa Creeks will collect the results of the assessment and produce a report. During this time, another exciting project will be ongoing. Working with CBE, Bates Middle School will sponsor grow-out stations for shore grasses, SAV, trees, and potentially oysters. The long-term goal is to have students grow the trees and plants and then restore hardened shoreline to a more non-structural and natural state.

## Nutrient Reduction Policies

### Clean Marina Initiative

The Maryland Clean Marina Initiative promotes and celebrates the voluntary adoption of measures to reduce pollution from marinas and recreational boats. Just started this year, 73 marinas have already pledged to “keep Maryland’s waterways free of harmful chemicals, excess nutrients, and debris,” and nine of these marinas have implemented rigorous pollution prevention

standards and are certified “Clean Marinas”. In the Lower Western Shore, Port Annapolis Marina in Annapolis and Herrington Harbour South Marina in Friendship were among this first group of certified Clean Marinas.

The Team also supported the Clean Marina Initiative’s application for Clean Water Action Plan funding to help marina operators implement innovative best management practices. The application was successful, and as a result, the Initiative was able to provide \$25,950 for three marinas in the South River watershed.

Throughout the year, the Team provided the impetus for the creation of two fact sheets describing regulations and procedures for disposing of abandoned boats. The fact sheets – one for boaters and one for marina operators – will be distributed at

DNR licensing offices, boat shows, and by Natural Resources Police Reserve Officers.

### Air Deposition

Under the original Chesapeake Bay Executive Council Directives charging the States with reducing nutrient pollution, air deposition was identified as “uncontrollable” and therefore not

specifically addressed as a pollution source.

However, the Lower Western Shore Team feels strongly that air deposition should be studied so we can understand the full impact of air deposition on nutrient loads.

In the spring, the Team invited air pollution specialists to explain how air deposition affects water quality through nitrogen oxide deposition. In the presentation, it was stated that up to 27% of the total nitrogen loading in this basin comes from the air.

In response to this information, the Team took two approaches in addressing this serious environmental concern. The first was to form a committee to gather more data on air deposition, identify the major stakeholders in addressing air pollution, and formulate an action strategy to address the pollution sources.

The second action was to advocate that air policy be adequately addressed under the new Chesapeake Bay Agreement. Subsequently, the Team conveyed to



*Clean marina practices are an important tool in reducing nutrient pollution in our watersheds.*



*Participants of the Spa Creek Walk-About listen to Annapolis Mayor Dean Johnson explain the importance of resident involvement in their watersheds.*



Governor Glendening their concerns regarding the utility deregulation legislation, and recommended to the Chesapeake 2000 Steering Committee that they explicitly identify air deposition in the new Bay Agreement.

### **Reforestation and Habitat Restoration**

One of the main Team objectives throughout its past has been habitat restoration and reforestation. The Team has held several workshops, public education events, and tree plantings to highlight the importance of adequate forested stream buffers.

Of specific interest to the Team this year was a proposal to reintroduce Atlantic White Cedars, once a predominant tree species in the basin, into an area in the Severn River watershed. The trees were raised by area school children, and the project will incorporate resident involvement and education. The long-term goal is to reestablish the Atlantic White Cedar forest as a demonstration of restoring an ecosystem to its historic state.



*By converting just 17 parking spaces, the Friends of College Creek and DNR reduced nutrient and toxic pollution, while also adding beauty and color to a self-sustaining ecosystem.*

## **Implementation Projects**

### **1999 Wade-In**

On June 13, the Herring Bay Workgroup sponsored the 2nd Annual Wade-In at Owings Cliffs in Southern Anne Arundel County. Scores of area residents attended the event, including State Delegates George W.

Owings, III and Virginia Claggett and County Councilman John Klocko. This year, Herring Bay residents walked out to a depth of 24 inches.

### **Bioretention Facility**

In late 1998, the Friends of College Creek and DNR developed plans, secured funding, and planted a rain garden in the DNR lower parking lot.

Stormwater runoff is a large contributor to nutrient and toxic pollution in our waterways, and runoff from DNR's parking lot flows directly into College Creek.

Throughout October, structural work was completed, and by November the Rain Garden was

ready to be planted. Neighborhood school children helped plant the flowers and shrubs. DNR personnel established monitoring equipment to measure the flow from storm events, the amount of nutrients ab-



*Team Members, area residents, and elected officials "Wade-In" at Owings Cliffs.*

sorbed by the garden, and the eventual flow into College Creek. Considering that there are over 70 parking lots in the College Creek watershed, and not a single one has any stormwater abatement facilities, the Team is working hard to promote the rain garden at the DNR parking lot as a model for other areas.

### **BayScaping Projects**

BayScaping is the use of native plants, shrubs, and trees in homeowner gardens. Since they are indigenous to this area, they are drought resistant, require very low maintenance, and help abate nutrient and sediment pollution.

As such, the Team has committed their resources to promoting and assisting in the implementation of BayScaping projects. Two examples include a planting at the Maryland State Office of the Comptroller in Annapolis and sites in front of the DNR Tawes State Office Building.

### **Tributary Team Habitat Grants**

In 1999, the Tributary Strategies Team Program secured \$100,000 in grant funding for implementing demonstration projects. The overall goal of the Teams' Grant Program was to focus on a few

large projects rather than supporting many smaller ones. The Lower Western Shore Team was awarded three out of a total of seven funded proposals. The projects are a stormwater retrofit, a shore stabilization project, and the establishment of a White Cedar forested wetland.

## Recommendations & Priorities

### Local Watershed Organizations

#### Rhode & West Rivers

Using the lessons learned from developing watershed organizations, the Team will focus its resources to assisting the Rhode and West River watershed associations. The Team feels the knowledge it gained in reaching area residents and educating them on nutrient reducing practices will be well served in these watersheds. Active environmen-



*Shore grasses and SAV are crucial elements to healthy ecosystems. SRF Member Rita Bruck-ler plants shore grasses on the South River.*

talists and stakeholders have already been identified, and the Team will be formulating a plan of action.

#### Annapolis Creeks

After the success of the Spa Creek Walk-About and Friends of College Creek, the Team will continue to promote the formation of an Annapolis Creeks watershed association. The Team will finish the watershed assessment report in Fall 1999, while still promoting resident involvement through various implementation projects. Further, the Team will begin focusing on the other two creeks within the city of Annapolis, Back Creek and Weems Creek.

### Implementation Projects

#### Reforestation and BayScapes

The Team will once again commit themselves to the goals of DNR's Stream ReLeaf Program, which is charged with planting 600 miles of stream-side buffers by 2010. By working with the many local watershed organizations, the Team plans to sponsor several tree planting events. Further, in response to Governor Glendening's Maryland Landscapes Program, the Team will use the past year's successful BayScaping projects to identify and promote future demonstration projects.

#### Living Resources and Habitat Restoration

For each of the past three years, the Severn River Workgroup has sponsored several living resources projects. To continue this

trend, the Severn River group will again raise and distribute one million oysters, promote oyster gardening on docks, nurture and plant shore grasses and SAV, and sponsor habitat restoration projects to ensure that future generations enjoy the same living resources we treasure today.

### Nutrient Reduction Policies

#### Clean Marina Practices

Since boating is such a major activity within the Lower Western Shore, the Team will continue to work with the Maryland Clean Marina Initiative, educate boaters to adopt pollution prevention measures, and participate in State efforts to identify waters of the State that are sensitive to marine sewage discharges and to formulate sound solutions.

#### Air Deposition

As air deposition accounts for more than a quarter of the total nitrogen load into the Lower Western Shore basin, the Team will continue to advocate air pollution remedies, as well as outreach to stakeholders for their involvement. Further, the Team will develop an action strategy to educate the public on their impact on air pollution through energy use, automobiles, and alternative transportation choices.

#### Failing Septic Systems

Failing septic systems are of special concern to the Team as much of the land in the basin immediately borders tidal water. The Team will review the recommendations from the recently finished On-Site Disposal System Task Force and formulate methods to address their stated issues.

# Lower Potomac

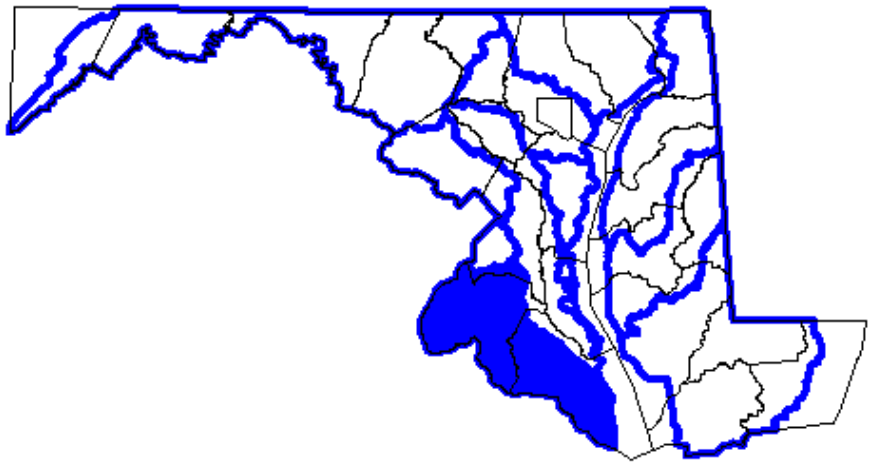
## Watershed Heroes

### GEORGE WILMOT Mattawoman Creek

Since the mid-1970s, George has been an environmental and community leader in his watershed as well as an active participant in statewide initiatives. Drawing from more than 40 years of living in Charles County, George has focused on water quality and monitoring issues for much of that time. He began his tenure on the State Water Quality Advisory Committee since the early 1980s, and has been a strong proponent for adequate water quality monitoring on the Lower Potomac Team. George was recognized for his long and dedicated service to the environment by being awarded the Chesapeake Bay Foundation's BaySaver of the Year award in 1998.

### FLUELLEN SAYF-UDDIN Wicomico River

In 1997, the Wicomico Scenic River Commission sponsored a "Country-side Stewardship Exchange," in which outside experts helped to educate residents on how to improve their watershed. One of the first citizens to participate was Fluellen, and since then she has been a valued asset to the Team. She is an active member in the Longview Beach Community Association, supporting environmentally sensitive projects. She has also been very successful in bringing in minority involvement into local activities and projects. On a more personal note, she is a favorite to the other members as she provides delicious culinary treats at outreach events, including homemade crabcakes!



## About the Team

Late in 1998, the Lower Potomac Team dedicated its attention to outlining priorities for the upcoming year. In their deliberations, members decided to focus on three distinct areas.

Sedimentation is a serious problem in Southern Maryland, exacerbated by tremendous growth and development. As such, the Team decided that soil erosion would be their top policy priority. Accordingly, the Team initiated a number of steps to educate area residents on how they could help abate this ecological threat to their tributaries, from hosting a workshop to preparing policy recommendations.

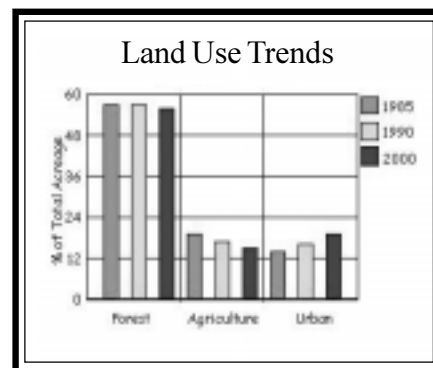
Also, the Team sponsored several projects aimed at reaching key constituencies -- new homeowners and students --

throughout Southern Maryland to highlight their impact on their watershed.

Lastly, the Team adopted a sub-watershed approach, wherein specific regions were targeted for restoration and demonstration projects. The three sub-watershed areas identified were the St. Mary's River, Wicomico River, and Mattawoman Creek.

## Accomplishments

### Shoreline Erosion & Sedimentation



Each and every year, the state of Maryland loses about 260 acres of shoreline due to erosion, and Southern Maryland constitutes a large part of that number. Excess sedimentation in

tributaries and rivers clouds the water, thereby blocking sunlight needed for bay grasses -- an



important building block of the Chesapeake Bay ecosystem. To address this issue, the Lower Potomac Team conducted several education and outreach activities to raise awareness of this serious environmental threat.

In January, the Team sponsored a Shore Erosion Workshop held in Charlotte Hall. By all accounts, the event was a great success, and well over 100 area residents attended to learn more about the impacts of sedimentation, the advantages of non-structural shore erosion controls over structural ones, and specific county permitting requirements. Residents conveyed their feelings on funding availability, the effects of stabilization practices on adjacent properties, and the need for using a comprehensive regional approach to shoreline projects.

Stemming from the success and public feedback of the workshop, the Team used their expertise on the issue of sedimentation to make recommendations to various decision makers. The first was a letter to Governor Parris Glendening explaining their concerns over the proposed dredge disposal project at Site 104. Considering the tremendous shore erosion control activities being conducted in Southern Maryland, the Team felt the proposal would run counter to their efforts. A second letter was delivered to the Shore Erosion Task Force, which was created by State legislation to develop recommendations on sedimentation issues across Maryland.

The third direct activity was investigating the beneficial use of dredge materials. Specifically in the Lower Potomac region, one Member proposed that spoils from an Army Corps of Engineers' dredging project near Cobb Island be used to create barrier islands for habitat restoration. Unfortunately, due to contractual constraints, the Cobb Island project was not a viable option. Due to these discussions, however, the Army Corps is now receptive to using spoils from future dredging projects for habitat restoration initiatives.

### **Outreach to New Homeowners**

A main focus of the Lower Potomac Tributary Team is educating area residents about their direct impact on their watershed. As such, the Team decided it was especially important that new homebuyers were properly informed on how they affect their new neighborhood.

### **Team Members**

Bob Boxwell, Chair, St. Mary's Friends of the Chesapeake  
David Waring, Vice-Chair, Business  
Susan Adams, Citizen  
Andris Bilmanis, Citizen  
Gilbert Bowling, Farmer  
Alan Cruikshank, Charles Co. Soil Conservation District  
Curtis Dalpra, Interstate Comm. on the Potomac Rvr Basin  
Bea Dewing, Citizen  
Beth Horsey, MD Department of Agriculture  
John Houser, Citizen  
Edward Krueger, Potomac Electric Power Company  
Jerry Michael, Charles County  
James Owens, Maryland Farm Bureau  
Robert Paul, St. Mary's College of Maryland  
Nancy Paige-Smith, St. Mary's College of Maryland  
Fluellen Sayf-Uddin, Citizen  
Christopher Tanner, St. Mary's College of Maryland  
Robert Thompson, Citizen  
Sue Veith, St. Mary's County Department of Planning  
Karen Wiggin, Charles County Office of Planning  
George Wilmot, State Water Quality Advisory Committee  
Bruce Young, St. Mary's Co. Soil Conservation District

### **Participants**

Gene Davies, Business  
Frank Houser, Business  
Mary Owens, Chesapeake Bay Critical Area Commission

### **Team Coordinator**

Sean McGuire

The Team decided to address public education in several steps. To start, the Team invited Tom Miller from the University of Maryland Cooperative Extension to give a presentation at one of its monthly meetings. Mr. Miller is an expert on septic systems, groundwater, and surface water and demonstrated how little pollution it takes to contaminate an entire watershed.

The second step was to educate real estate agents through their required course work on issues regarding growth and homeowner practices. Mr. Miller gave a similar presentation to the Southern Maryland Association of Realtors, which was also attended by area residents and Team members.

Lastly, Mr. Miller and the Tributary Team contributed several copies of an information guide entitled, "*Homework*" to be given to new homeowners by the Realtors. The guidebook was

developed by the University of Maryland Cooperative Extension and Mr. Miller, and explains the basics of potential pollution sources in the home, including: failing septic systems, overuse of fertilizers and pesticides, landscaping, and others. The Team hopes to continue its work with Realtors to maintain a link with present and future homeowners.

### **Watershed Scholars Program**

A crucial component to any successful environmental approach is including the youth of a community. Without educating the leaders of tomorrow, all of our efforts of today will certainly fail. In order to actively pursue students in Southern Maryland, the Team piloted an initiative called the Watershed Scholars Program.

The Team first secured a grant of \$1,000 to start the education program. The goal is to have local high school students apply to the Tributary Team for a specific environmental project. The student can request funds for monitoring tools, specific scientific equipment, or other materials to complete their project. The student will then be required to present their project and subsequent findings to the Team at one of its Spring meetings.

### **1999 Wade-In**

This year, the Lower Potomac sponsored their first Wade-In, along with eight of other nine Tributary Teams. In order to foster stewardship with our restoration efforts, the Tributary Team partnered with Pepco at their power plant in Morgantown. The Lower Potomac's Pepco representative, Edward Krueger, helped coordinate and lead the event, along with State Senator Thomas Middleton and State Delegate

John Wood. The Team reached a depth of 28 inches, a great start in what is hoped to be the first of many more Wade-Ins.

In addition to the Wade-In, Senator Middleton and other participants helped in placing over 300,000

oyster spat in one of the shore erosion lagoons at the Pepco site. Oyster restoration is of top concern throughout the Bay, as levels today are only 1% of what they were when John Smith first sailed upon these waters. Through this event, the Team hopes to continue its work with Pepco on many more restoration and protection projects.

### **Agriculture & Water Quality**

Team members wrote, published and distributed the *Water Quality*



*Team members and elected officials "Wade-In" at the Pepco plant in Morgantown in Charles County.*

and *Agriculture in the Lower Potomac Watershed* brochure. It was distributed to the Soil Conservation Districts in the tributary basin and also handed out in conjunction with the Lower Potomac Tributary Strategy exhibit. The brochure provides a general overview of Tributary Strategies and highlights agricultural initiatives in the Lower Potomac. The brochure is used as an outreach tool to the agricultural community.



*Wade-In participants help relocate over 300,000 oyster spat. With current levels of only 1% of those seen by John Smith, every oyster counts!*

### **St. Mary's Workgroup**

A main impetus behind choosing the St. Mary's River Watershed is that the US Environmental Protection Agency recently secured funds for St. Mary's College to conduct a detailed water quality assessment of the Watershed. At the same time, two College professors, Drs. Robert Paul and Chris Tanner, became very active with the Team. Members found this to be a great opportunity to work together on a variety of projects within this Watershed.

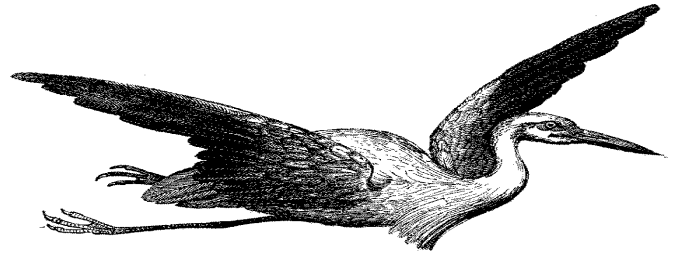
One project was to conduct a BayScaping demonstration project on the College grounds. BayScaping employs indigenous species of flowers, trees, and shrubs rather than invasive, nonnative plants. This helps reduce water consumption and decrease maintenance time and costs. Team members met through the spring with College maintenance officials on logistics and upkeep. While the process of working with the College was rewarding, unfortunately due to the drought the planting was forced to be rescheduled. From these conversations, however, the BayScaping project will occur in the spring. In addition, various stormwater and habitat restoration projects are being developed.

### **Mattawoman Creek**

In November 1998, Members of the workgroup identified two specific priorities they would address throughout the year. The first was reforestation efforts within the Mattawoman Creek watershed. To start, workgroup members teamed with the Maryland DNR Forester, Brian

Stupak, to identify potential tree planting sites. Riparian forest buffers are crucial to any tributary's success as they provide energy for streams' food web, regulate cooler temperatures, diffuse rain events, and filter pollutants before they enter the stream. Ten sites were initially identified for reforestation efforts, and plans are currently being developed for spring plantings.

The workgroup's second priority was to identify the sources of nutrient and sediment loadings into Mattawoman Creek and work to reduce these pollutant inputs. In July, Dr. David Correll from the Smithsonian Environmental Research Center (SERC), presented to the Team the results of the first two years of their intensive study on the water quality of streams in the Mattawoman watershed and elsewhere in Charles County. His results clearly show that those tributaries of the Mattawoman with developed watersheds contribute the highest loads of nutrients and sediment per acre.



## **Recommendations & Priorities**

### **Shore Erosion Issues**

The Lower Potomac Team will continue to monitor and actively engage in sedimentation issues and initiatives. The Team will review the recommendations delivered by the Shore Erosion Task Force and evaluate any possible subsequent actions. Second, the Team will continue to work with the Army Corps of Engineers to investigate possible beneficial uses for dredge materials for future projects.

### **St. Mary's River Workgroup**

The Workgroup will continue plans for a spring planting of their BayScaping project. In addition, members will continue to work with the College on both the stream water quality assessment as well as other demonstration projects on the St. Mary's College campus and surrounding areas.

### **Mattawoman Creek Workgroup**

The top priority will be to use Dr. David Correll's research to identify problem streams, then find nutrient pollution sources. Once the specific pollution sources are identified, the Workgroup will develop a workplan with appropriate actions and recommendations to improve the water quality of the impaired streams.



*The beautiful view of the St. Mary's River from the grounds of St. Mary's College. The Team and College are working together to assess the watershed's water quality.*



# Patuxent River

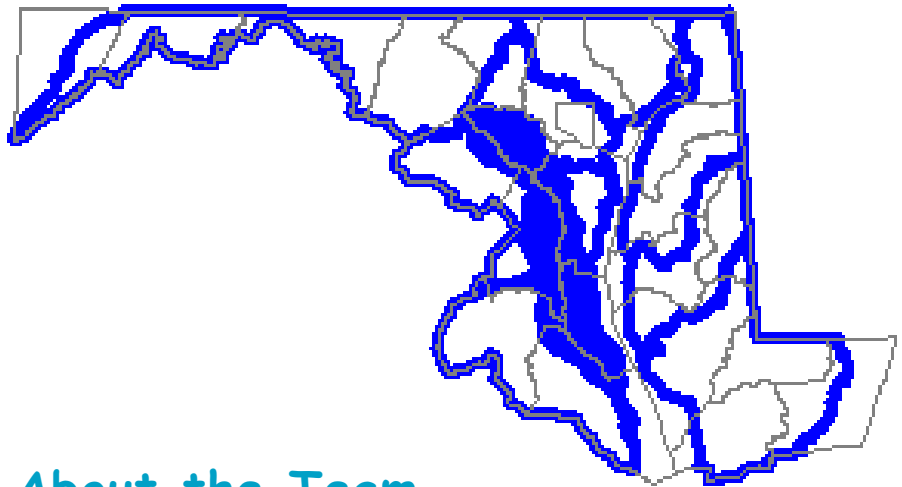
## Watershed Heroes

### MARY KILBOURNE Western Branch

Mary has enjoyed and worked to protect her watershed for more than 30 years. While living in Upper Marlboro, she currently works for the Patuxent River Park in Jug Bay. But it is her volunteerism that makes her such a leader in the environmental community. Just some, but not nearly all, of the organizations she is active in are the Audubon Society, the Nature Conservancy, the Maryland Ornithological Society, Audubon Naturalist Society, and the Sierra Club. Mary is currently working on a Prince George's County initiative planning for growth and development for the next 20 years. In recognition of her tremendous work, the Chesapeake Bay Foundation awarded her as the 1999 Conservationist of the Year.

### JACK LEIGHTY Hunting Creek

A retired veterinarian, Jack has had a lifelong interest in nature and conservation. This is especially so in his treasured Hunting Creek Watershed, a tributary of the Patuxent River. Jack is a member of a number of environmentally active national and local organizations. As he lives in Huntingtown in Calvert County, Jack is currently chairing the Hunting Creek Watershed Management Task Force, a volunteer citizens organization that cooperates with Calvert County government to assist in the conservation management of the largest watershed in the County. Also, Jack is helping coordinate an effort by the Commission to establish a canoe/kayak path along the entire Patuxent River.



## About the Team

The Patuxent River Commission is a 34-member body created by State legislation in 1980 and serves as the Patuxent River Tributary Team. Its membership represents a cross-section of the watershed's interest groups, and serves as an interjurisdictional forum for the development of Patuxent River issues and implementation of the Patuxent River Policy Plan.

Further, the Commission addresses a variety of policy issues that affect the entire watershed, such as Smart Growth, the Clean Water Action Plan, Stormwater Management, TMDLs, agricultural management, and Program Open Space.

The Patuxent Watershed spans from its headwaters in Montgomery and Howard Counties to

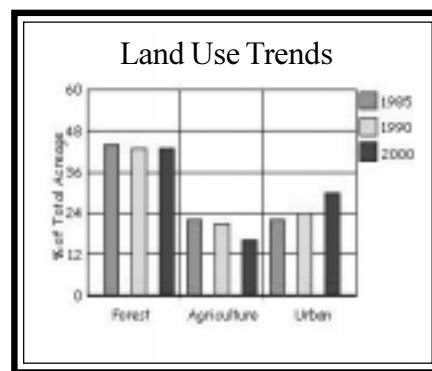
an estuarine portion and down to the Bay at Solomons Island.

The Commission met in locations throughout the watershed that included: Maryland Department of Agriculture; Sandy Spring Museum; Academy of Natural Sciences Estuarine Research Center, Jefferson Patterson Park; City Hall, City of Bowie; Patuxent River Park and; Patuxent Natural Wildlife Center.

During the year, the Commission focused much of its efforts on

three specific subwatersheds in order to address nutrient and sediment pollution: Cuckhold Creek in St. Mary's County; Hunting Creek in Calvert

County, and the reservoir watersheds in the upper Patuxent watershed. In addition, the Commission responded to several statewide initiatives.



# Accomplishments

## Policy Recommendations

Throughout the year, the Commission commented and presented recommendations on several key policies and issues affecting the Patuxent Watershed. With its diverse membership, the Commission was able to express realistic and pragmatic perspectives on water resource programs, legislation, and policies, including: Western Branch TMDL; Chesapeake Bay Agreement; Priority Funding Areas; Rural Legacy applications; and, MDA's proposed nutrient management regulations.

### Urban Development/Sediment Erosion

Cuckold Creek Workgroup has been working on addressing development on highly erodible soils in St. Mary's County. Over the past two years, the Workgroup worked closely with St. Mary's County and many different stakeholders to address issues regarding development and erosion within St. Mary's County. This year they briefed St. Mary's County Commissioners on the impact of current development regulations on erosion, noting that there is an urgent need to address this issue. The County Commissioners directed the Planning Commission to work with the Cuckold Creek Workgroup to include language in the Unified Land Development Code that will address Workgroup concerns. The Workgroup continues to work with the Planning Commission in this effort.

### Environmental Outreach and Education

The Commission participated in Tributary Team briefings to local government elected officials within the Watershed, speaking on Commission activities and the "Patuxent River Policy Plan - An Update for 1984 to 1997."

In the spring, the Reservoir Workgroup combined with the Outreach Workgroup to successfully organize and conduct a one-day watershed event on May 15, 1999. More than 25 agencies, businesses, and citizen groups participated in the event with information and hand-on activities to help visitors become better stewards of the reservoirs and their watersheds. The event, held at Supplee Park on the southern end of the T. Howard Duckett Reservoir, attracted about 100 visitors and participants.

## Team Members

Mary Lorsung, Chair, Howard County Council  
Ginger Ellis, Vice-Chair, Anne Arundel Co. PACE  
Mary Abrams, MD Office of Planning  
Charles Adams, MD State Highway Administration  
Nazir Baig, MD-National Capital Park & Planning Comm.  
David Bourdon, Prince George's Co. Soil Conserv. District  
Mark Bundy, MD Department of Natural Resources  
Hamer Campbell, Suburban MD Building Industry Assoc.  
Larry Cartano, Business  
Wesley Coleman, US Army Corps of Engineers  
Meosotis Curtis, Mont. Co. Dept. of Environ. Protection  
Marland Deen, Charles County Commissioner  
Bernie Fowler, Citizen  
Shelby Guazzo, St. Mary's County Commissioner  
Eileen Setzler-Hamilton, Chesapeake Biological Lab.  
William Harmeyer, US Army at Fort Meade  
Kenneth Keen, Waterman  
William Kennedy, Washington Suburban Sanitary Comm.  
Elizabeth Hickey, Univ. of MD, Environ. Finance Cntr.  
Mary Kilbourne, Citizen  
Pamela King, Cooperative Extension Service  
Jack Leighty, Citizen  
Marc Lieber, Business  
Dominic Motta, Prince George's Co. Natural Res. Div.  
Royden Powell, III, MD Department of Agriculture  
Mark Kendal Smith, University of Maryland  
Alexander Stewart, St. Mary's Co. Soil Conservation Dist.  
Bob Summers, MD Department of the Environment  
Beverly Warfield, Prince George's Co. Department of Environmental Resources  
David Vaughn, City of Laurel Dept. of Plan. and Zoning

## Participants

Steve Bieber, MD Department of the Environment  
David Brownlee, Calvert Co. Dept. of Planning & Zoning  
Robert Jarboe, MD Department of Agriculture  
Leroy Jonas, MD State Highway Administration  
Susan Overstreet, Howard Co. Dept. of Planning & Zoning  
Lori Shirley, City of Bowie Dept. of Planning and Economic Development  
Sue Veith, St. Mary's Co. Dept. of Planning and Zoning  
Karen Wiggan, Charles Co. Dept. of Planning and Growth Management

## Team Coordinators

Rich Hall, MD Office of Planning  
Ken Hranicky, MD Office of Planning  
Sean McGuire, MD Tributary Strategies Teams

The Watershed Day was partially funded through a Chesapeake Bay Trust (CBT) grant to the Montgomery County Department of Environmental Protection, with additional funding provided by the Howard County Department of Public Works.

The Workgroup continued to work with other agencies in the Patuxent reservoir watershed to complete follow-up volunteer stewardship activities to meet the CBT grant requirement. Outreach activities involved significant member agency contributions during the year and included: Izaak Walton League; Calvert, Howard, and Montgomery Counties' Soil Conservation Districts; City of Laurel; USDA-NRCS; UM-CES; Howard County Recreation and Parks; and many others.

### Year 2000 Legislative Session Information Exchange

A large responsibility of the Commission is providing policy recommendations to decision makers and the State Legislature. Accordingly, the Commission devoted its entire December meeting being briefed on upcoming legislative issues and notes were distributed to all ten Teams.

The speakers for the information exchanged included official representatives from five State agencies and departments, and

three representatives from non-profit environmental groups. Just some of the topics discussed were Smart Growth and Smart Transportation initiatives, air and energy issues revolving around the State's deregulating electric utilities, septic systems, and the Water Quality Improvement Act.

### Vision Statement

The Commission felt that it was imperative that Commissioners develop a vision statement, which would lead their efforts into the next century. The vision statement needed to draw a mental picture of how the Patuxent River should look in the future, and begin to lay out the steps to attain those qualities. After lengthy discussions, and inspirational guidance from Senator Bernie Fowler, the Commission finalized their statement.

## Patuxent River Commission Vision Statement

*We, the Patuxent River Commission, envision a Patuxent River ecosystem as vital and productive in 2050 as it was in the 1950s. We therefore commit to be stewards and advocates for the Patuxent River and to lead and inspire actions to protect, enhance, and restore living resources and the natural, cultural, economic, and recreational values of the Patuxent River and its watershed.*

## Recommendations

The Commission's recommendations on many watershed policy issues are articulated in the Patuxent River Policy Plan, which was updated in November 1997. A workgroup met throughout the year to address water quality monitoring issues, develop a draft atlas of water quality monitoring locations and parameters, discuss the locations of monitoring stations, and report recommendations to the Commission.

Commissioners were concerned in particular about the potential loss of flow and water monitoring data that could be used in local decisions on land use and environmental permitting. In the short term, data could be used in monitoring for compliance and environmental quality assessment. In the long term, the data could be used for modeling and policy evaluation. The Commission adopted the workgroup's recommendations that DNR should not remove Unity Station as it produces vital information



*Commissioners visited locations throughout the Patuxent over the past year. Here, traveling up the Western Branch, the Commission gets a first hand look at issues impacting Jug Bay and enjoys the beauty of their watershed.*



for WSSC; Commission representatives should continue advocating within the Maryland Water Monitoring Council (MWMC) for improved inventory of water monitoring data sources, and for improved quality control of data from these sources. The MWMC should take steps to provide more baseline environmental data, broadening the focus of data collection beyond water quality issues. The Office of Planning was asked to finish an inventory of monitoring activities within the Watershed.

## Team Priorities

### Patuxent Policy Plan

The Commission will seek adoption of the updated Patuxent Policy Plan by local governments throughout the watershed. Local jurisdictions and State agencies are currently reviewing their programs and regulations for consistency with the Patuxent Policy Plan. After this review, the Commission will ask local governments to adopt the update by resolution.

### Outreach Inventory Database

The Reservoirs Workgroup has now merged with the Commission's Public Outreach Workgroup to pursue a joint mission to follow up on the Outreach Inventory and Database. The Inventory was funded during 1998 by a Clean Water Act Section 319 grant on behalf of the Patuxent River Commission. Next steps include distribution of the database to libraries and other places of general public access and beginning to identify



*People take to the water during the Patuxent Reservoir Stewardship Day. The Commission will be working to improve access to the river by establishing a canoe trail along the Patuxent.*

“gaps” in outreach programs that the Workgroup may want to address. The outreach database will also be used to get in contact with and brief local organizations on the Patuxent River Commission activities and the Bay.

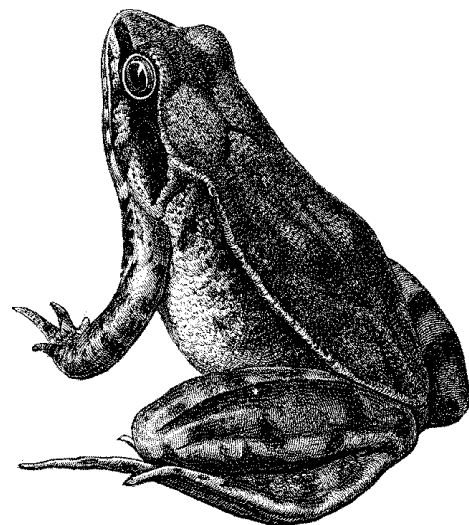
### Public Access/Canoe Launch on Hunting Creek

Located in Calvert County, Hunting Creek has a mix of agricultural, forest, suburban, and urban land and is under high development pressure. As a consequence, public access to waterways is very limited. It is the goal of the Hunting Creek Workgroup to acquire a low-impact public access site in the Watershed suitable for a canoe launch and an aquatic nature trail. The concept is to have a canoe trail from the Patuxent reservoirs all the way to the mouth of the river.

Initially the Workgroup will concentrate on the Jug Bay and Hunting Creek area. The Workgroup is currently working

with State agencies, local government, local land-acquisition organizations, and local citizen groups to purchase a tract of land for this purpose.

The Workgroup hopes that such a site would be utilized for education and recreation activities. The workgroup will be pursuing a TEA-21 grant through the State Highway Administration that funds recreational trail improvements. The Workgroup will also be creating a trail map that would identify launch sites and points of interests.



# Middle Potomac

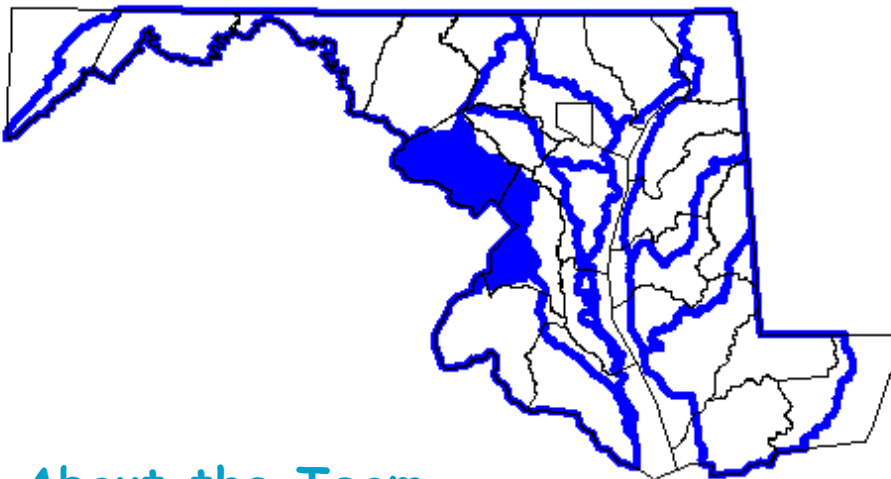
## Watershed Heroes

### DAVID PLUMMER Middle Potomac

David is the project forester for Montgomery and Howard Counties and has worked for the DNR's Forestry Service for almost seven years. David has either planted or supervised the planting of over 75,000 trees during his tenure. In the Anacostia watershed, where he previously worked, and in the watersheds of Montgomery and Howard Counties, where he presently works, David mostly enjoys working with volunteers. He believes that getting people involved, which he does through outreach and tree planting activities, is the most valuable thing that he can do. David works with private land owners, schools, and volunteers and is the Secretary of the Howard and Montgomery Forestry Conservancy District Boards.

### NEAL FITZPATRICK Montgomery County

Neal has worked for the Audubon Naturalist Society for 20 years as an advocate and community leader for sensible land use and the protection of existing natural ecosystems. He has been a strong proponent of alternatives to the Inter-County Connector, the establishment of "live where you work" land use policies, and the development of public transport infrastructure. Neal has been instrumental in the establishment of water quality monitoring programs and in the protection of the headwaters of the Paint Branch. He is also an active participant in Montgomery County's "Legacy Open Space" Program.



## About the Team

The Middle Potomac Tributary Team is particularly focused on the expected growth in nutrient loadings. Growth, beyond 2000, in discharges from agriculture, point source, and development have been identified as the principal sources of additional nutrient loads.

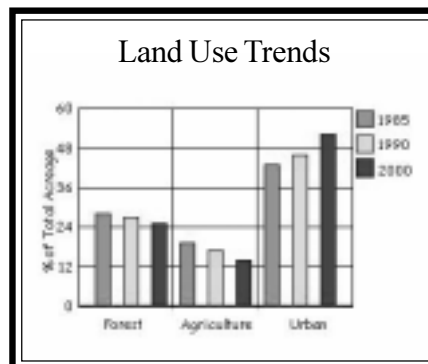
The Bay Program's report, *Maintaining Progress in Restoring the Chesapeake Bay*, notes particular difficulty in controlling nutrient loads from urban and suburban developed land. Despite urban stormwater permits, no net decrease in nutrient loads from urban runoff is expected. The report states that the "ability to maintain a capped load will be determined by the success in controlling direct and indirect load increases from development." Another major

source of nutrients will come from flow increases to wastewater treatment plants due to continued growth.

## Accomplishments

### Agriculture Activities in the Middle Potomac Watershed

The year began with a Team representative participating in the 1999 Horse Expo. The display "Bay Country is Horse Country" was exhibited. It depicted various agricultural best management practices for horse owners and was a cooperative effort between the Tributary Team, various Soil Conservation Districts (SCDs) and the Maryland Department of Agriculture. The Team representative will continue to work with future Horse Expos.



### **Team Sponsored Study of Stream Diversity and Best Management Practices**

The Middle Potomac Tributary Team co-sponsored a Clean Water Act Section 319 grant with the Audubon Naturalist Society entitled, “Water Quality Monitoring in Selected Rural Watersheds in the Maryland Piedmont of Montgomery County.” The study monitored the effectiveness of land use and best management practices that were applied to rural or agricultural lands. Water quality monitoring by the Audubon Naturalist Society’s Volunteer Program gauged the effectiveness of BMPs by the biological integrity of the aquatic life in the respective streams. The study showed that good biological diversity was present when best management practices were applied and maintained on associated farmlands.

### **Riparian Forest Buffer Videos and Workshops**

The Alliance for the Chesapeake Bay undertook a major effort to involve the Tributary Teams in a Riparian Forest Buffer initiative. The initiative included a video and an associated workshop. The Alliance solicited local knowledge from the Teams in order to develop a watershed specific video describing the importance of forested buffers and the general methodology used in planting them. The Teams previewed the draft video and supplied comments to the Alliance for the final versions. The video for the Middle Potomac Team focused on agricultural communities. Copies of the finished product were disseminated to the Teams to be used in education and outreach activities. The Teams were invited to participate in one of two Alliance sponsored, hands-on, riparian buffer workshops conducted at the Beltsville Agricultural Research Station in College Park, Maryland and at the Wye River Center on the Eastern Shore of Maryland. About 25 people participated in the two workshops.

### **Initiative in Sustainable Farming**

The Middle Potomac Team recently turned their attention to exploring and defining “sustainable farming.” The Team toured the Accokeek Foundation’s Ecosystem Farm, where Shane Labrake gave an engaging explanation of their Community Supported Agriculture (CSA) production. The Team’s agricultural workgroup will be sponsoring an “Ag Field Day,” a workshop and tour, planned for Fall 2000, that will focus on sustainable farming

### **Team Members**

Gary Felton, Chair, University of Maryland  
Edward Graham, Vice-Chair, Wash. Council of Govt’s  
Nazir Baig, MD Nat’l Parks and Planning Commission  
David Bailey, Potomac Electric Power Company  
Ginny Barnes, Sierra Club  
Collin Burrell, Dept. of Health/Envir. Health Admin., DC.  
Dan Carstea, MD Nat’l Parks and Planning Commission  
Mow-Soung Cheng, Prince George’s County  
Wesley Coleman, US Army Corps of Engineers  
Kathryn Conant, US Army Corps of Engineers  
Wilt Corkern, Accokeek Foundation  
Jeremy Criss, Mont. Co. Dept. of Economic Development  
Neal Fitzpatrick, Audubon Naturalist Society  
Carlton Haywood, Interstate Comm. on Potomac R. Basin  
Cy Jones, Washington Suburban Sanitary Commission  
David Lake, Mont. Co. Dept. of Environmental Protection  
George Lechlides, Maryland Farm Bureau  
Sara Loechel, Beltsville Agricultural Research Center  
Ed Merrifield, Citizen of Derwood  
Mark Pfefferle, City of Gaithersburg  
Julia Phifer, MACTEC  
Marion Porter, MCSI Technologies, Inc.  
Marshall Rea, Montgomery Co. Soil Conservation District  
Gary Smith, MACTEC  
Susan Strauss, City of Rockville  
Paryse Turgeon, MD Department of the Environment  
Cameron Wiegand, Mont. Co. Dept. of Enviro. Protection  
Karen Wiggin, Charles County Office of Planning

### **Participants**

Bas Hargrove, Alliance for the Chesapeake Bay  
Matt Mulder, Accokeek Foundation  
Bob Murphy, Alliance for the Chesapeake Bay  
David Plummer, MD Dept. of Natural Resources’ Forestry  
Lisa Soukup, City of Rockville  
Bill Spicer, Naval Surface Warfare Center  
Keith Van Ness, Mont. Co. Dept. of Enviro. Protection

### **Team Coordinator**

Danielle Lucid

practices throughout Maryland.

### **Key Accomplishments of Local Governments**

In 1999, local governments in the mid-Potomac basin made substantial progress in implementing watershed-based planning, design, and restoration activities which fulfill the objectives of protecting water quality and living resources in local neighborhood streams, while contributing to the overall health of the downstream Chesapeake Bay ecosystem.



Montgomery County, in addition to its regular, modern stormwater and sediment control permitting programs, undertook many activities in stream and wetlands restoration and in public education in 1999. Stream and wetlands restoration work concentrated primarily in previously developed subwatersheds, established before modern stormwater controls were required. Priorities for these projects were determined through Montgomery County's highly acclaimed watershed-based Countywide Stream Protection Strategy (CSPS).

Within the Middle Potomac basin, Montgomery County presently has over 70 stream and wetlands restoration or stormwater retrofit projects in various stages of assessment, design and construction. Notable milestones in stream and wetlands restoration and watershed assessment occurred in the Anacostia Watershed, Sligo Creek, Paint Branch, Little Paint Branch, Northwest Branch, Northwest Branch, Rock Creek, Little Falls, and Cabin John Creek.

Montgomery County has also continued work on a very aggressive public outreach program to alert the public about stream quality problems and their roles in pollution prevention.

### **Prince George's County**

Prince George's County is a leader in the areas of developing new stormwater technology, new modeling tools, chemical, physical and biological monitoring programs, stream restoration projects, urban retrofit, green

development, and pollution prevention as can be seen by reviewing the annual NPDES Municipal Stormwater Program report, the Anacostia River Restoration Report, the Port Towns Economic / Revitalization Program, the Low Impact Development Design Manual, the Bioretention Design Manual, the County's Capital Improvement Program, and the County's Watershed Protection Planning Model.

The Federal Emergency Management Agency ranks the Prince George's County's stormwater program in the top 1% in the nation. EPA has twice (in its nine year history) awarded Prince George's County its National Excellence Award for municipal stormwater programs and received 15 or more national and state awards in the last 5 years. There is no other jurisdiction in the state or Chesapeake Bay region that has a more comprehensive and innovative environmental program or that has done more to protect water resources and advance the state-of-the-art.

Another indicator of the level of the county's actions and efforts is that, since the inception of the Clean Water Act Section 319 grant program and state revolving fund loan program, no other county in the state has won or received more funding for environmental and water quality improvement projects, spending on an average over \$3 million dollars per year on capital projects over the last 15 years.

## **Recommendations & Priorities**

### **Maintaining the Nutrient Cap**

There are a number of challenges facing the states as they prepare their cap management strategies. Maryland is addressing these issues through a recently formed Cap Strategy Committee, made up of a broad range of stakeholders, to assist the State in developing its strategy. The Middle Potomac Team is well represented on the Cap Strategy Committee and plans to remain involved in a number of ways. The Middle Potomac Tributary Team's representatives on the Cap Strategy Committee will assist in the development of nutrient load increase projections; help to craft policies for cap allocations to existing sources; help introduce and test new technologies, especially for urban runoff control; and provide a liaison among multi-state watersheds, such as the Potomac River watershed.

The Middle Potomac Tributary Team has focused many discussions on cap issues particularly as they relate to the Middle Potomac watershed. In the Middle Potomac watershed, utilities, cities, counties, farms, and industry have all taken difficult steps to reduce nutrient loads to the Chesapeake Bay.



The goal of reducing “control-able” loads by 40% is at hand. Maryland’s Tributary Teams have helped accomplish a great deal, but the Middle Potomac Tributary Team thinks that the hard part, maintaining the nutrient “cap,” is just beginning. For the Middle Potomac watershed, the cap strategy coupled with increased growth, foretell potentially and significant new requirements for wastewater treatment plants, urban runoff and agricultural nonpoint sources.

### **Potomac River Workshop**

The Middle Potomac Tributary Team, among others, has long recognized the need for interstate coordination of water quality issues in the Potomac River basin. Given that details for maintaining the cap are to be left to the individual states for development “in coordination with local governments,” with “major involvement by citizens, local watershed groups and other stakeholders,” the Team thinks that a major effort fostering dialogue is important. Dialogue and coordination is all the more urgent with the recent issuance of the Chesapeake Bay Program’s (CBP) nutrient cap management report and pending integration of a Bay-wide TMDL with the Bay Program. This will be particularly challenging in the Potomac watershed which includes the Bay partner states plus West Virginia.

Specifically, there are two major water quality challenges facing the Potomac watershed. There is an imminent need to identify a near term nutrient cap management plan in the Potomac water-

shed that will maintain the year 2000 40% nutrient reduction goal and there is a need to attain water quality standards by 2010 to prevent the Chesapeake Bay Program from becoming a purely regulatory program. The Team believes that the Potomac River Workshop will provide a needed forum for this major work.

Accordingly, the Middle Potomac Tributary Team, in cooperation with other Potomac Tributary Teams, will be assisting in the planning of the Potomac River Workshop to be held in Spring 2000. The CBP Nutrient Subcommittee (NSC) has agreed to take the lead in organizing and conducting the Workshop. Representation from all states in the basin including Maryland, Virginia, the District of Columbia, Pennsylvania, and West Virginia will be targeted.

The workshop will address point source, urban runoff, agricultural runoff, and air deposition and will educate participants regarding key nutrient management issues including the development of recommendations that the respective states can use in preparing the nutrient “cap” strategies; and the development of recommendations for use by the Chesapeake Bay Program and the states in integrating the cooperative nature of the Bay Program with regulatory requirements.

### **Potomac River’s Flowby**

The Team has recently pressed, through correspondence to Governor Parris Glendening, for a new analysis of the Potomac River’s present minimum 100 mgd flowby. This flow was

established in the 1970s as the minimum flow that must remain in the river for living resource protection. The Potomac River is a major source of drinking water for the Washington D.C. area, with intakes above Little Falls. For some, the 1999 drought sparked concerns that this minimum flow is not adequate. Requests for new flowby studies have also been supported by several elected officials throughout the Washington region and by environmental groups.

### **Living Resources**

Since their inception, the Middle Potomac Tributary Team has advocated the tremendous need for greater attention to be paid to living resources, especially in the small neighborhood streams that are of most interest to local citizens. The new local partnership agreement now being developed properly reflects a recognition that this issue is important to the Bay and to local governments. Continued emphasis on the non-tidal portions of the watershed with associated goals and indicators is paramount.

### **Cost Share Programs**

The Team believes that present MDE and DNR cost-share programs are woefully inadequate to stimulate the level of local participation needed to address stream restoration needs, particularly in major metropolitan areas. The legislature needs to authorize far higher levels of cost-share funding to stimulate greater local government participation. The Team is also concerned about putting local governments in the position of competing against State agencies for stream restoration funds.

# Upper Potomac

## Watershed Heroes

### BERNIE ANDERSON

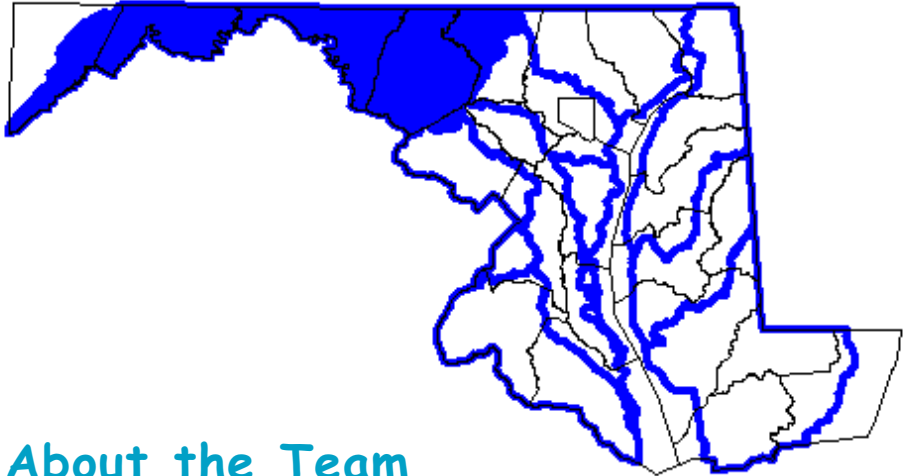
#### Upper Potomac

Drawing on thirty years of marketing experience with IBM, Bernie has been instrumental in developing the Team's 'Speaker's Bureau' program. While working as a professor at Pace University, Bernie's first experiences with environmental stewardship and conservation were with the Westchester Land Trust, where he assisted in their planning and organizational efforts. When returning to Maryland in 1993, Bernie became active in his local church's social justice work, making environmental issues his primary concern. Over the past year, Bernie has helped the Team acquaint citizens to their watershed and illustrate how their individual actions are interconnected to that stream's overall health.

### CRAIG HARTSOCK

#### Allegany County

In December 1999, Craig Hartsock was unanimously awarded the position of Team Chair. Craig is presently the Chair of the Western Maryland Resource Conservation and Development Council, Co-Chair of the Maryland State Envirothon Committee, Chairman of Allegany County's Project IMPACT Educational Committee, and is also a member of the Evitts and Town Creek Watershed Steering Committee, the Maryland State Land Reclamation Committee and the Maryland Conservation Partnership Quality Steering Team. A Team member since 1995, Craig has been a leader in many of the Team's successes and has been a wonderful role model of what can be accomplished in a local watershed.



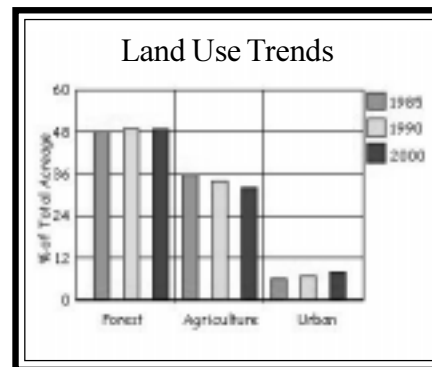
## About the Team

In the early months of 1999, the Upper Potomac Team members realized that to be effective in their mission they would need to be educators. The Team worked the majority of the year on the simple premise that, the people most interested and best equipped to manage the watersheds and its resources are its residents – individuals, corporations and local governments. By instilling a sense of stewardship in these audiences, the Team worked to multiply its message throughout the largest of Maryland's ten tributary basins.

ship of local watershed resources through citizen outreach and education; and fostering a network of communication among governments, farmers, businesses and citizens toward the common goal of protecting and restoring water quality and living resources in the Bay and its tributaries.

This message was further addressed with the Center for Watershed Protection (CWP),

which developed a set of model land development principles that promote economically viable and environmentally sensitive site planning techniques. This



## Accomplishments

### Speakers Bureau

Components of the mission statement for the Tributary Teams include: heightening awareness, through education, of each individual's impact on water quality; encouraging the steward-

1996 project to encourage better design at the site level became known as the 'Roundtable' and included planners, engineers, developers, attorneys, fire officials, environmentalists, transportation and public works officials from nationally recognized organizations.



Members of the Upper Potomac Tributary Team have been working with the CWP and the Frederick County Planning Department on a locally adapted site planning roundtable for Frederick County. The Frederick Roundtable project included local individuals from similar fields as the 1996 National Roundtable. The group reviewed, critiqued and analyzed Frederick County's Subdivision, Zoning and Stormwater Management regulations and Road Design Manual to identify codes and ordinances that effectively act to prohibit or impede better site designs and that are a hindrance to environmentally sensitive development. Frederick County's development codes were then compared to the 22 national model land development principles created by CWP in 1996 with a goal of adopting revised subdivision and zoning codes to better protect natural resources and sensitive environmental features.

### **Floodplain Management Workshop**

On January 27, the Upper Potomac Tributary Team co-sponsored their second annual educational workshop. This year's workshop was held in Allegany County focusing on Floodplain Management. The goal of the workshop was to educate the public on "how they can become effectively involved in the process to restore and protect their environment" said Craig Hartsock, member of the Upper Potomac Tributary Team. Seventy-five homeowners, consultants, home-builders, and government officials attended. The workshop was held in partnership with the Upper Potomac Tributary Team, Allegany County Permits & Compliance and PROJECT IMPACT Allegany Soil Conservation District.

### **Home Builders Association Annual Home Show**

The Upper Potomac Tributary Team along with Allegany County Permits & Compliance, PROJECT IMPACT, and the Allegany Soil Conservation District, hosted a booth with information about opportunities for public involvement in the tributary strategies process. Attendees received copies of the Tributary Team 1998 annual report along with other promotional items. Over 2400 people attended the three day event, held March 26-28, 1999.

### **Stream Restoration Seminar and Field Trip for Local Science Teachers**

On April 26, 1999, and on May 13, 1999 the Upper Potomac Tributary team partnered with

### **Team Members**

Thomas Miller, Chair, Univ. of MD Coop. Extension  
Craig Hartsock, Vice-Chair, Allegany Soil Conserv. Dist.  
Dan Bard, Maryland Department of Agriculture  
Chris Batten, Business  
Pat Baumgardner, Citizen  
John Denoma, NaturaLawn of America  
Bill Effland, Citizen  
Tim Goodfellow, Frederick County Dept. of Planning  
Carlton Haywood, Interstate Commission on thePotomac River Basin  
Richard Holter, Farmer  
Ellie Kirsch, Izaak Walton League  
Carole Larsen, Frederick County Department of Planning  
Paul Massicot, MD Dept. of Natural Resources  
Ray Morgan, University of Maryland  
Wilbert Paul, Farmer  
Alison Rice, Allegany County Department of Planning  
Patricia Schooley, Citizen  
Robert Thompson, Potomac Valley Industrial Supply

### **Participants**

Dennis Zack, Citizen  
Don Morris, Ridge and Valley Stream Keepers  
Kara Unger, Western Pennsylvania Conservancy

### **Team Coordinator**

Matt Fleming

PROJECT IMPACT to conduct training sessions for local elementary, middle and high school science teachers. Teachers were instructed on floodplain management in Allegany County and how flooding problems degrade Maryland's tributaries and ultimately the Chesapeake Bay. They participated in a stream model demonstration and a field trip to visit stream restoration projects. Everyone participated in an afternoon of information gathering and curriculum matching. Additional resource material was provided along with a list of resource professionals.

### **Neff Run Stream Walk**

On April 29 1999, Upper Potomac Tributary Team members, Craig Hartsock and Alison Rice participated in a stream walk/survey of Neff Run, a tributary to George's Creek. The Maryland Department of the Environment instructed the participants on the Stream Corridor Assessment Methodology (SCAM). The purpose of the survey was to develop a coordinated approach for restoration activities in the Neff Run Watershed. The ultimate goal is to develop an integrated restoration plan with recommended

actions to address water quality, acid mine drainage, flooding, habitat and stream stabilization issues.

### **Water Days**

The Upper Potomac Tributary Team, partnered with PROJECT IMPACT on April 15, 1999, for Allegany County's first "WATER DAY" (Watershed Awareness To Encourage Restoration DAY). One-hundred and fifteen Wesmar Middle School students participated in a morning of picking up debris and trash along George's Creek. During the afternoon sessions, Team members, Craig Hartsock and Alison Rice, instructed students on how land use and flooding impacts water quality in the George's Creek watershed. Discussions were facilitated concerning development in flood prone areas and how their morning clean-up efforts affected the community. This activity was coordinated with the Allegany County Board of Education, which enabled students to earn service learning credits.

On May 24, 1999, a second "WATER DAY" was held. The day consisted of eighty Allegany High School students participating in a clean-up of Jennings Run and Wills Creek Confluence. Upper Potomac Tributary Team member, Alison Rice instructed the students on the history of flooding in the Jennings Run and Wills Creek Watershed.

### **FISH-IN at Rocky Gap State Park**

On June 13, the Upper Potomac Tributary Team held its Second Annual "Fish-In." The event

promoted sound water quality practices in the Chesapeake Bay Watershed. Participants included children ages 2-12. DNR's Scales and Tails made a presentation before the contest, and prizes were given for the largest, longest and first fish caught. Team members assisted with the educational activities and the fishing contest. Attendees were provided with educational and promotional items.

### **Murley's Branch Site Visit**

On October 27, 1999, Allegany County Team members Wilbert Paul, Craig Hartsock, Robert Thompson and Alison Rice hosted the Upper Potomac Tributary Team and the Chesapeake Bay Trust on a tour of stream restoration sites in Allegany County. Members of the Upper Potomac Tributary Team and the Chesapeake Bay Trust participated in a site visit along Murley's Branch to promote funding for stream restoration in the Town Creek Watershed.

### **Habitat Restoration Initiative Proposal**

In response to the priority watersheds as identified in the Maryland Clean Water Action Plan, the Upper Potomac Tributary Team targeted a project for restoration in the George's Creek Watershed in Allegany County. George's Creek has been identified as both a Category One (needing restoration) and a



*Team Member Robert Thompson, 'Master of Ceremonies', commences the second Annual Fish-In at Rocky Gap Park.*

Selected Category Three Watershed (needing protection) in the Maryland Clean Water Action Plan.

The George's Creek Stream Restoration Project has been selected for funding from the Maryland Department of Natural Resources' Tributary Team Habitat Grants Program. The project involves developing a habitat, floodplain and riparian restoration program on approximately 1,500 linear feet of George's Creek, near the Town of Lonaconing.

The project is located on land recently purchased by the Allegany County Commissioners. The County acquired the property for the purpose of removing several homes and a business within the floodplain of George's Creek that had been repeatedly damaged by flood events. Because the site is adjacent to Route 36 and Westmar High School, it has tremendous potential for development as a greenway park for the community, and will provide unlimited opportunities for environmental education.

Key deliverables for the project include; a streambank restoration (1,500 linear feet), a wetland creation (.5 Acre), rock vane/fish habitat structures (6 Each), riparian buffer plantings (1,500 linear feet), and floodplain restoration (4.5 Acres).

### **Agriculture Field Day**

July 29, 1999, was the date for the annual Western Maryland Field Day held at the University of Maryland's Western Maryland Agricultural Research Center just outside of Keedysville. At this event, two demonstrations were provided on the aerial seeding of a cover crop of wheat into a six acre stand of soybean on the University property. On hand to explain the environmental benefits of cover crops was Dr. Russell Brinsfield with the University of Maryland's Wye Research and Education Center on Maryland's Eastern Shore. Overall, approximately 125 agricultural producers and landowners in the region observed the aerial seeding that was performed by East Coast Helicopters out of Gettysburg, Pennsylvania.

Grant funds were also utilized in this area to help pay cost-share monies to farmers for planting cover crops during the 1999 season. As of December 1, 1999, the following acreage had been planted in the Monocacy Watershed:

	<u>Applications</u>	<u>Acres</u>
Carroll	13	1,309
Catoctin	12	2,272
Frederick	56	7,262
Mont.	4	527
Wash.	3	233

## **Recommendations & Priorities**

The Upper Potomac Tributary Team will continue to make recommendations through and support the recommendations made by the Inter-Team Coordinating Committee. This committee was formed to provide an opportunity to increase communication among the Teams and State agencies, share information and coordinate issues of interest to several Teams.

### **Educate and Communicate**

In the new year, the Upper Potomac Team's highest priority will be the continued focus on education. The Team will participate in several planned outreach events, including the continuation of the Speakers Bureau, workshops and the third annual Fish-In. Through these events the Team will work to encourage government officials to adopt the goals of the Tributary Teams and the New Bay Agreement and to educate the public about the issues facing the region.

### **Frederick Buffer Planting**

In Spring 2000, the Upper Potomac Tributary Team will be partnering and working with DNR's Forest Service in planting and restoring riparian buffers at selected sites in the Watershed. Using Frederick City and Frederick County 'fee-in-lieu' Forest Resource funds plus various grants from the Environmental

Protection Agency and US Fish and Wildlife Service, the replanting will occur at various locations in Frederick County. Buffers on feeder streams to Lake Linganore and tributaries to Carroll Creek will be restored where high mortality of past saplings and seedlings from the hot, dry summer of 1999 occurred. New buffers will be planted inside the Frederick City limits on Rock Creek and Carroll Creek, two stream systems heavily impacted by land development. The team hopes to also get the public involved in these projects to heighten awareness of water quality impacts and to foster a better land stewardship ethic.



*Craig Hartsock tours Team Members through the Town Creek watershed, identifying restoration projects for the new year.*



# Lower Eastern Shore

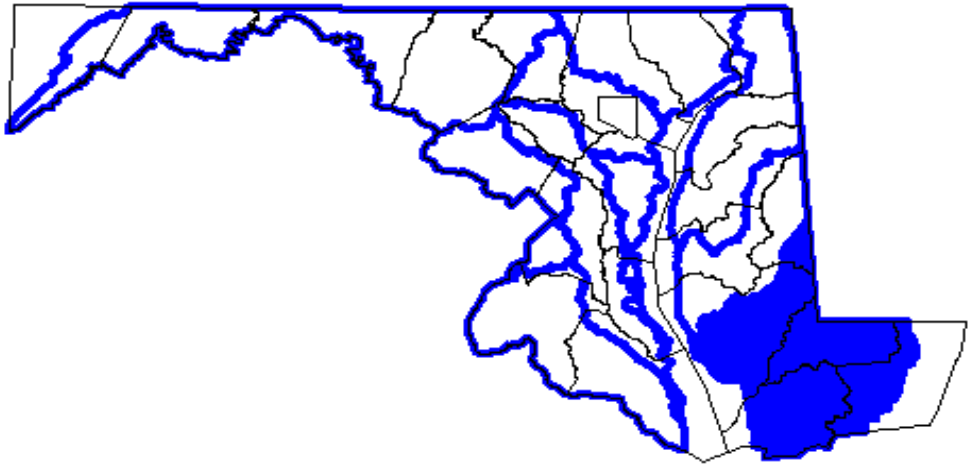
## Watershed Heroes

### KATHERINE MUNSON Lower Eastern Shore

While presently a Worcester County Long Range Planner, Katherine has shown her dedication to the Lower Eastern Shore watershed in a variety of ways. For one, she assisted the Team in organizing a nutrient management workshop in November 1998. She also worked with a variety of partners to compose and introduce voluntary environmental guidelines for golf courses. Katherine is also a dedicated member of Coastal Bays, and a key organizer of the free lecture series on alternative design and growth management. Further, Katherine somehow finds the time to participate in the 1999 Water Resource Leadership Initiative Program and will complete her practicum on the topic of growth management on the Lower Shore in December 2000.

### TEE O'CONNER Nanticoke River

Tee has shown her dedication to the Lower Eastern Shore Watershed in a variety of ways, as well as being a Tributary Team member. Tee is a Member of the Friends of the Nanticoke, was a key figure in the creation of the Nanticoke Watershed Alliance, and has been on the Board of Directors of the LES Heritage Committee. Also, Tee actively participated in the purchase of Roaring Point and was appointed to serve as a member of the Green-ways Advisory Board for Wicomico County. She participated in the 1999 Water Resources Leadership Initiative, assisted in clean-ups over the years along the Nanticoke River, and is an active participant in the Shad Festival in Vienna.



## About the Team

The Lower Eastern Shore Team started 1999 off with vigorous momentum. This momentum stemmed from a trend of successful initiatives in 1998.

In 1999, Team members concentrated their efforts in focus groups, planning sessions, brainstorming, and developing project ideas. This intense development of future priorities will bring them into year 2000 with a strong vision, and ready to move forward with multiple initiatives.

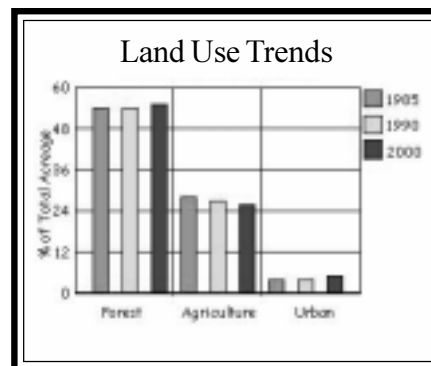
Meanwhile, Team members have been involved in the Lower Eastern Shore Conservation and Restoration Action Strategy

(LESCRAS) process as well as the Public Drainage Task Force, an initiative of the Choptank Tributary Team.

Team members have also gathered together at several meetings this year to hear presentations on a variety of issues, becoming

better informed about what can be done to improve water quality in the Lower Eastern Shore Watershed. Presentation topics included submerged aquatic vegetation

decreases in Tangier Sound, riparian forest buffer targeting, the T.E.A.M. Program (Teaching Environmental Awareness in Maryland), and spray irrigation of wastewater.



## Accomplishments

### Lower Eastern Shore Conservation and Restoration Action Strategy (LESCRAS)

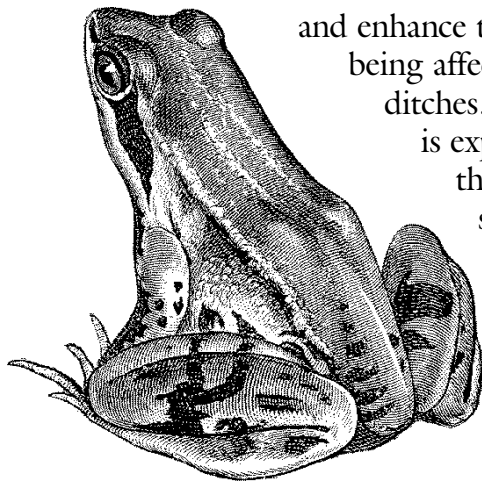
Throughout 1999, members of the Lower Eastern Shore Tributary Team met with representatives from State and local agencies to develop a strategy and implement a Clean Water Action Plan pilot project, also known as the Lower Eastern Shore Conservation and Restoration Action Strategy (LESCRAS). Within the Lower Eastern Shore Tributary Basin, this Steering Committee chose to focus on 12 digit watersheds within the Lower and Upper Pocomoke, and the Lower Wicomico Watersheds. An implementation committee has been organized to focus funding and coordinate with other watershed conservation and restoration activities for the selected watersheds.

### Public Drainage Task Force

In February 1999, Team members met with members of the Choptank Tributary Team, the Bay Workgroup, Public Drainage Association Managers, and State staff to visit Public Drainage Association ditches and discuss the need to improve the maintenance and environmental management of the ditches. In response, the Governor's Bay Cabinet began to develop the Task Force and officially appoint representatives in July.

Task Force members were appointed from 23 constituency groups, including three from the Lower Eastern Shore Tributary Team. The mission of the Task Force is to identify the ways and means of protecting the well-being of people who depend on effective public drainage - farmers, residential property owners, highway users, and others - while at the same time attempting to protect and enhance the resources

being affected by the public ditches. The Task Force is expected to publish their findings in the summer of 2000.



### Team Members

William Bostian, Chair, Nature Conservancy of Maryland  
Phil Hager, Vice-Chair, US Army Corps of Engineers  
Russ Brinsfield, Wye Research and Education Center, University of Maryland  
Glenn Carowan, Blackwater Wildlife Refuge  
Charles Cipolla, Friends of the Nanticoke/  
Nant.Wshed.All.  
Robert Davis, Farmer  
Rick Dwyer, Wicomico County Planning Department  
Jeff Fisher, Glatfelter Pulp Wood Company  
Julia Fritz, Worcester County Soil Conservation District  
Joan Kean, Somerset County Planning Department  
Abigail Lambert, Lower Shore Land Trust  
Billie Laws, Worcester Forestry Board  
Dave Mister, Maryland Department of Agriculture  
Tee O'Connor, Nanticoke Watershed Alliance  
Michael Sigrist, Natural Resources Conservation Service  
Tom Weiss, Maryland Office of Planning

### Participants

Angela Baldwin, Maryland Conservation Corps  
Max Chambers, Agriculture/Aquaculture, Citizen  
Lisa Jo Frech, Nanticoke Watershed Alliance  
Nancy Howard, MDNR - Public Communications  
Don Jackson, Chesapeake Bay Foundation

### Team Coordinator

Christy Mills

### First Annual Wade-In on the Nanticoke River

The Lower Eastern Shore Tributary Team hosted its first Wade-In on the Nanticoke River in partnership with the Chesapeake Bay Foundation and the Nanticoke Watershed Alliance. Around 20 citizens attended the event, with Steele Phillips as the official "Bernie Fowler" of the Wade-In. The Team reached a depth of 12 inches at the inaugural event, and hopes to return to reach deeper waters in the future. For the first year, the event was quite a success. WBOC and the *Daily Times* covered the event.

### County Council and Commissioner Briefings

In the summer and fall of 1999, Team members helped prepare and present information on key environmental issues and concerns to County officials in Wicomico, Worcester, Somerset, Caroline, and Dorchester Counties. The briefings resulted in a successful update for the Commissioners and Council Members and the establishment of a closer relationship between the Counties and Tributary Team members.

### **Water Resource Leadership Initiative**

Throughout 1999, two Lower Eastern Shore Tributary Team members and a staff person participated in the Water Resource Leadership Initiative Program. The Program was designed to create a network of leaders on the Eastern Shore that would develop better communication, facilitation, and mediation skills and apply those skills to the protection and improvement of water quality on the Eastern Shore.

### **Developing and Distributing the ACB Streamside Buffer Video**

Lower Eastern Shore Tributary Team members contributed feedback and photographs to the development of a video that highlighted the benefits of streamside buffers. The video, and workshop sessions corresponding to the videos, were developed by the Alliance for the Chesapeake Bay in cooperation with all ten Tributary Teams. The Team has also begun to develop a plan for distributing and showing the video.

### **Response to Renewed Chesapeake Bay Agreement**

Lower Eastern Shore Tributary Team members held a focus group to develop recommendations for inclusion in the renewed Chesapeake Bay Agreement. The team discussion addressed



*The Lower Eastern Shore Team hosted its first annual Wade-In on the beautiful Nanticoke River, reaching a depth of 12 inches at the inaugural event.*

the Chesapeake Bay Agreement, its successes and failures, priority challenges and emerging issues, the effectiveness of "measurements of success," the effectiveness of the Chesapeake Bay Program, and suggested changes that would improve the Chesapeake Bay Program and/or the Renewed Chesapeake Bay Agreement.

### **Chesapeake Lands Acquisition**

The Lower Eastern Shore Tributary Team hosted a public presentation on the Chesapeake Lands Acquisition in December 1999, attended by over 100 people. The meeting addressed the acquisition history of the 58,000 acres of forested lands, the goals and purposes of the acquisition, the management concepts, the long-term planning process, restoration activities and priorities, outreach, and next steps. Interested members of the public will have an opportunity to participate in the planning process for the lands.

## **Recommendations**

### **Cover Crop Program**

The Lower Eastern Shore Tributary Team, acknowledging the effectiveness of the Cover Crop Program, recommends that the Governor and the Maryland State Legislature continue funding the program, and if possible, supplement the funding in order to meet the needs of the agricultural community.

### **Chesapeake Lands Planning Process**

The Team recommends that the Department of Natural Resources engage local watershed organizations in the up-front planning process for the newly acquired Chesapeake Lands.

Although this planning process is not expected to officially begin until Spring 2001, Team members plan to keep the communication lines open with public and State agency planning efforts.



## Team Priorities

### Lower Eastern Shore Conservation and Restoration Action Strategy (LESCRAS)

Team members would like to continue involvement in the Lower Eastern Shore Conservation and Restoration Action Strategy (LESCRAS) as it moves into the implementation phase by assisting with project identification and implementation.

### Chesapeake Lands

Team members would like to assist in the planning process for the newly acquired Chesapeake Lands.

### Public Drainage Task Force

Task Force Members plan to identify methods of protecting the well-being of those who depend on effective public drainage, while protecting and enhancing the resources affected by public drainage. Team members will continue to participate in the Public Drainage Task Force.

### Workshop for Children

Team members would like to organize a workshop for children



*John Shepard, Public Drainage Association Coordinator, discusses the need to improve the maintenance and environmental management of the ditches at a public drainage tour with Lower Eastern Shore and Choptank Team members.*

on ways to improve and protect water quality. The format of the workshop would resemble the nutrient management workshop that the Team organized in 1998.

### Cosponsoring and Hosting Regional Workshops for Alternative Design

Lower Eastern Shore Tributary Team members would like to co-sponsor and participate in local and regional seminars/workshops relating to alternative development design and rural design techniques, with the goal of educating stakeholders and establishing demonstration proposals and projects for innovative subdivisions.

### Agricultural Community Workshop

Team members would like to organize an agricultural community workshop, highlighting options and tools that are needed to assist the family farm in maintaining economic viability.

### Environmental Implications of Urban

### Development

Team members would like to convene sessions with local planning commissions in order to address the environmental



*The Lower Eastern Shore Team was represented at Maryland's Coast Day, providing information on how individuals can improve and protect water quality.*

implications of urban development, as well as the effects of urban development on priority farm land and water quality.

### Community Education and Outreach

Team members would like to work with existing groups to sponsor events and offer sessions on Tributary Team related topics.

### Prioritizing Agricultural Lands

Team members would like to assess and prioritize agricultural lands, using existing data, to target preservation efforts.

### Monitoring Data

Team members would like to coordinate and disseminate monitoring data to the public from Maryland State agencies' and local watershed organizations' efforts.

# Choptank River

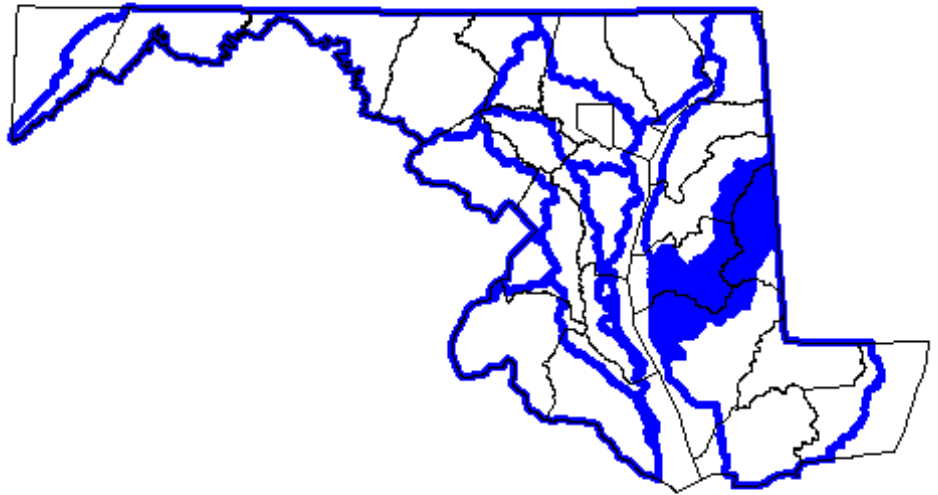
## Watershed Heroes

### BILL EDWARDS Choptank River

When one sees all the activities that Bill is involved in, it's hard to believe that he has time to think about anything else! Specifically, Bill has been a Team member since 1995, and recently spearheaded the Clean Farms Recognition Program. According to his vision, this initiative will enhance and acknowledge the stewardship ethic of farmland and adjacent waterways. Bill himself owns and operates a small grains and Bison farm in Dorchester, and is also a member of the American Farmland Trust, Maryland Cattlemen's Association, Maryland Farm Bureau, National Bison Assoc., past Director of the Eastern Bison Assoc., and serves as Chairman of a venture to form the Eastern States Bison Cooperative.

### ROBERT WIELAND Choptank River

Robert Wieland has shown his dedication to the Choptank watershed in several ways. Robert worked with a variety of partners in 1998 to organize the Oyster Management and Environmental Quality Workshop. This forum discussed the ecological role of benthic filter feeders, the impact of these organisms on water quality, and resource management strategies. The forum was attended by farmers, watermen, citizens and Team members alike. Robert also founded the Talbot Waste Watchers and worked with the Choptank Team to organize the Oyster Recovery and Habitat Restoration Initiative. The Team received \$25,000 to build and stock one acre of an oyster reef in a tributary of the Choptank River.



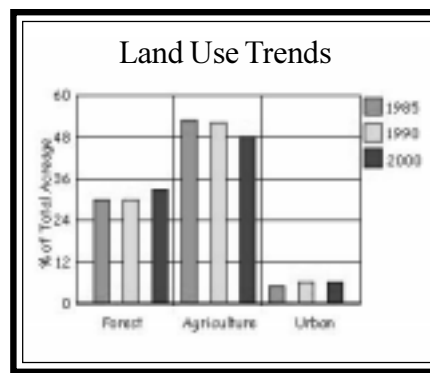
## About the Team

For the Choptank Tributary Team, 1999 was a year of focusing their efforts in workgroups. Workgroups were established in the areas of agriculture, developed lands, and living resources. These workgroups allowed the Team members to develop a deeper understanding of the issues and an ability to move forward more efficiently with projects. The Team alternated their workgroup meetings with full meetings, while maintaining workgroup communication with the entire Team.

In this past year, the Choptank Tributary Team was able to successfully elevate

two prominent issues to a broader level; that of public drainage and the Clean Farms Recognition Program. Team members gathered together at several meetings this year to hear presentations on a variety of issues, becoming better informed about what can be done to improve water quality in the Choptank watershed. Presentation topics included information

on monitoring and living resources in the Choptank River, riparian forest buffer targeting, the TEAM Program (Teaching Environmental Awareness in Maryland), and alternative wastewater treatment systems.



# Accomplishments

## Public Drainage Task Force

In July 1998, Choptank Tributary Team members encouraged the Bay Cabinet to organize a Public Drainage Task Force. In February 1999, Choptank Tributary Team members met with members of the Bay Workgroup, Public Drainage Association Managers, and State staff to visit Public Drainage Association ditches and address concerns about the need to improve the maintenance and environmental management of the ditches. In response, the Bay Cabinet began to develop the Task Force and officially appointed representatives in July.

Task Force members were appointed from approximately 23 constituency groups, including three Choptank Tributary Team members. The mission of the Task Force is to identify the ways and means of protecting the well-being of people who depend on effective public drainage - farmers, residential property owners, highway users, and others - while at the same time attempting to protect and enhance the resources are affected by the public ditches.

## Oyster Recovery & Habitat Restoration Initiative

Choptank Tributary Team members received \$25,000 of the Tributary Team Habitat Grant funds to build and stock one acre of a closed oyster reef in a tributary of the Choptank River. This project is in partnership with the Chesapeake Bay Foundation and the University of Maryland's Center for Environmental Science Horn Point Lab hatchery. Choptank Tributary Team members will be working with the above partners to implement the project in the year 2000.

## Developing and Distributing a Streamside

### Buffer Video

Choptank Tributary Team members contributed feedback and photographs to develop a video that highlighted the benefits of streamside buffers. The video, and workshop sessions corresponding to the videos, were developed by the Alliance for the Chesapeake Bay in cooperation with all ten Tributary Teams. The team has also developed some ideas for distributing and showing the video in the year 2000.

## Water Resource Leadership Initiative

Throughout 1999, a Choptank Tributary Team member, State contact, and staff person participated

## Team Members

Craig Zinter, Chair, Talbot Soil Conservation District  
Gerald Adams, Easton Utilities  
Thomas Bramble, Queen Anne's Soil Conservation Dist.  
William Corkran, Jr., Citizen  
William Edwards, Farmer  
Ted Haas, Cooperative Extension  
David Harris, Farmer  
Karen Houtman, Dorchester County Planning and Zoning  
Catherine Hunt, Pickering Creek Environmental Center  
Roby Hurley, Citizen  
Richard Hutchison, Farmer  
Betsey Krempasky, Caroline County Planning and Zoning  
Rick Leader, Pickering Creek Environmental Center  
James Lewis, Jr., Cooperative Extension  
William Malkus, Farmer  
Sharon Morrison, Gateway Marina  
Andrew Myers, Citizen  
Dave Nemazie, U. of MD Center for Environ. Science  
Daniel Shortall, Jr., Farmer  
Helen Spinelli, Friends of the Great Choptank River  
Robert Wieland, International Economics-Washington

## Participants

Margaret Carter, Citizen  
Nick Carter, Maryland Dept. of Natural Resources  
Michael Nash, McCrone, Inc.

## Team Coordinator

Christy Mills

in the Water Resource Leadership Initiative program. The program was designed to create a network of leaders on the Eastern Shore that would develop better communication, facilitation, and mediation skills and apply those skills to the protection and improvement of water quality on the Eastern Shore.

## Tuckahoe Watershed Riparian Buffer Incentive Project

Choptank Tributary Team members and the Maryland Eastern Shore Resource Conservation & Development Council (RC&D) received Clean Water Act Section 319 funds for a project to encourage landowners in the Tuckahoe Creek Watershed to plant riparian buffers. The incentive is a one-time payment of \$200 per acre, pending their enrollment in the Conservation Reserve Enhancement Program.

In March 1999, Choptank Tributary Team members met with members of RC&D, Natural Resources Conservation Service, the Maryland



Department of Agriculture to discuss the project. These partners will be implementing the project in the year 2000.

### **First Annual Wade-In at the Cardboard Boat Races**

In June 1999, Choptank Tributary Team members hosted their first Annual Wade-In at the Cardboard Boat Races on a tributary of the Choptank River, the Tred Avon River. The Wade-In, a symbolic test of water quality, was able to reach over 1000 community members as they came out to the event and witnessed this measurement of local water quality.

### **Conservation Reserve Enhancement Program (CREP) Letters**

Choptank Tributary Team members wrote letters to the editors of local papers recognizing farmers for their subscription to CREP as well as publicly advertising the benefits of the program. The letter was printed in the *Star-Democrat*, *The Daily Banner*, and *The Delmarva Farmer*.

### **Response to Renewed Chesapeake Bay Agreement**

Choptank Tributary Team members held a focus group to develop recommendations for inclusion in the renewed Chesapeake Bay Agreement. The Team discussion addressed the Chesapeake Bay Agreement, its successes and failures, priority challenges and emerging issues, the effectiveness of "measurements of

success," the effectiveness of the Chesapeake Bay Program, and suggested changes that would improve the Chesapeake Bay Program and/or the Renewed Chesapeake Bay Agreement.

### **County Council and Commissioner Briefings**

In the spring and summer of 1999, Choptank Tributary Team members helped prepare and present information on key environmental issues and concerns to County officials in Caroline, Queen Anne's, Dorchester, and Talbot Counties. The briefings resulted in a successful update for the Commissioners and Council Members and the establishment of a closer relationship between the counties and Tributary Team members.

### **Maryland Cap Workgroup**

A member of Choptank Tributary Team has been representing the Eastern Shore Tributary Teams on the Maryland Cap Workgroup. The Workgroup is responsible for developing rec-

ommendations for meeting the nutrient cap in Maryland. The Chesapeake Bay Program's Cap Issues and Policy Workgroup had developed a framework for addressing the cap at the Bay watershed level, and issued a report on that framework in August. The Maryland Cap Workgroup, with representation from State agencies, local governments, and other tributary teams, will be refining and adding to these ideas, and focusing on Maryland issues and programs.

### **Water Conservation Lesson Plans**

The Choptank Tributary Team and Pickering Creek Environmental Center developed a set of water conservation lesson plans through a grant from the Clean Water Act Section 319 Program and the Chesapeake Bay Trust. The curriculum includes lessons on water consumption, water conservation, and "taking action." The curriculum is geared toward upper elementary and middle school students. Team



*In June, Choptank Team members hosted their first Wade-In at the Cardboard Boat Races on the Tred Avon River. Here, Team Member Dave Nemazie takes one giant leap for water quality.*



*In February, Team members met with the Chesapeake Bay Workgroup, Public Drainage Association managers, and State staff to visit public drainage ditches and address maintenance and environmental concerns.*

members have been working to encourage the implementation of the lessons.

### **Teaching Environmental Awareness**

Choptank Tributary Team members worked with Teaching Environmental Awareness in Maryland (T.E.A.M.) Coordinator, Matt Chasse, in order to develop a volunteer base for the T.E.A.M. program as it expanded this year to the Eastern Shore.

### **Innovative Wastewater Treatment Project**

A Choptank Tributary Team member and staff person met with designers of innovative wastewater treatment facilities and several Dorchester County communities in order to develop a demonstration project of an innovative wastewater treatment system in a rural community that is at risk of septic failures. The primary wastewater treatment option considered was a constructed wetland, pending grant support of the project. The site location is still pending.

**Choptank River**

## **Recommendations**

The Choptank Tributary Team, acknowledging the effectiveness of the Cover Crop Program, recommends that the State of Maryland continue funding the program, and if possible, supplement the funding in order to meet the needs of the agricultural community. The Team would also like to see additional funds allotted for cover crops employed with no-till practices.

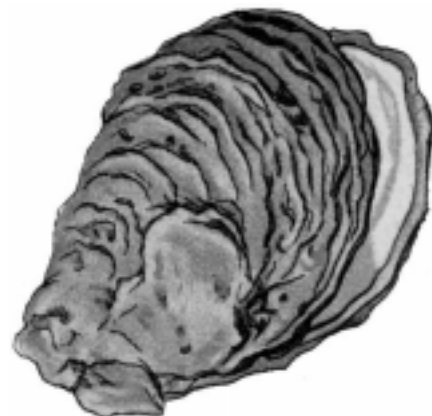
The Team recommends that there be additional support allotted to Public Drainage Associations in order to improve their ability to work effectively and minimize water quality degradation. The Team looks forward to a report and conclusion of the Public Drainage Task Force in a timely manner.

The Choptank Tributary Team, acknowledging the recent hiring of regional Conservation Reserve Enhancement Program (CREP) outreach personnel, recommends that there be additional staff

added to support CREP sign-ups based out of the Soil Conservation District offices. The Team also recommends that the CREP advisory board raise rental rates statewide.

The Team recommends that tax incentives be made available for agricultural landowners adopting conservation easements, plans, and best management practices.

The Choptank Tributary Team recommends that the State Highway Administration employ best management practices to reduce sediment erosion into local waterways when cultivating wildflower patches.



## Team Priorities

### MD Clean Farm Initiative

The Choptank Tributary Team has launched an initiative which will enhance the stewardship of farm/ranch land, streams and waterways. This will be accomplished by promoting and recognizing the voluntary adoption of measures to reduce pollution to our air, land, and water. Team members believe this can best be accomplished by promoting the understanding and adoption of best management practices, rather than a regulatory approach. This effort plans to coordinate with the Maryland Department of Agriculture's Office of Resource Conservation, technical agencies, Sierra Club, Audubon Society, Quail Unlimited, Ducks Unlimited, and others.

### CREP Soil Rental Rate Restructuring

Choptank Tributary Team members consider the present system of CREP payment to be unrealistic in some cases. Team members look forward to developing a more realistic CREP subscription system, for both the gentry landowner and the farmer.

### Public Drainage Task Force

Task Force Members plan to identify methods of protecting the well being of those who depend on effective public drainage systems, while protecting and enhancing the resources affected by public drainage systems. Team members will continue to participate in the Public Drainage Task Force.



*Team members actively pursued public outreach methods, including watershed education. This poster helps residents find their "Watershed Address".*

### Tuckahoe Watershed Riparian Buffer Incentive Project

Team members will be implementing the Tuckahoe Watershed Riparian Buffer Incentive Project with members of RC&D, Natural Resources Conservation Service, and the Maryland Department of Agriculture.

### Stormwater Design and Management Manual

Choptank Tributary Team members plan to review and comment on the Maryland Department of the Environment's Stormwater Management Regulations and Stormwater Design Manual.

### MDE Draft Septic Regulations

Choptank Tributary Team members plan to review and comment on the Maryland Department of the Environment's Draft Septic Regulations. A member of the Governor's Task Force on Septics will also be working with the Team on potential involvement in other related areas. Team members will continue to investi-

gate alternative wastewater treatment options for areas with failing septic systems as well as designated "Areas of Special Concern".

### Shoreline Erosion

Sedimentation into our tributaries is a problem all along the mainstem of the Bay, and the Choptank region is no exception. Accordingly, Team members plan to get more involved with local shoreline erosion issues, connecting the appropriate resources with local needs.

### Oyster Recovery and Habitat Restoration Initiative

Team members will be working with the Chesapeake Bay Foundation and the University of Maryland's Center for Environmental Science Horn Point Lab to implement the Oyster Recovery and Habitat Restoration Project in the year 2000. The project will be building and stocking one acre of a closed oyster reef in a tributary of the Choptank River.



# Upper Eastern Shore

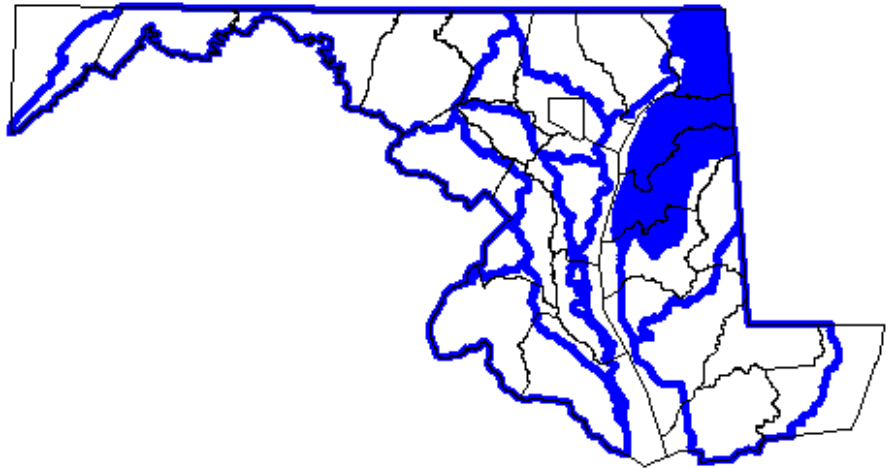
## Watershed Heroes

### ALAN QUIMBY Chester River

Alan shows his dedication in a variety of ways, through his membership with the Tributary Team as well as Chief Sanitary Engineer with Queen Anne's County. He is responsible for the planning, funding, operation and maintenance of the County's two wastewater treatment plants and ten water plants. Alan oversaw a pilot study on the Nitrogen removal capabilities of manmade wetlands at the Kent Island wastewater facility. He was also instrumental in encouraging Chestertown and Elkton to upgrade their wastewater treatment plants with Biological Nutrient Removal. Alan is also a member of the Chesapeake Bay Foundation, Center for Marine Conservation, World Wildlife Fund, and League of Conservation Voters.

### ANDREW McCOWN Sassafras River

Andrew has taught Chesapeake Bay Ecology for Echo Hill Outdoor School since 1978, and has been an associate director for the school since 1980. He founded the School's summer "Explore" program and Chesapeake Heritage Initiative program. He has commercially harvested oysters and captained the *Skipjack Elsworth* for seven winters, from 1988 to 1995. Andrew is a founding board member of the Chester River Association, a board member and past president of Kent Conservation Inc., as well as a board member of the Eastern Shore Land Conservancy. Finally, Andrew has been a performer with the critically acclaimed and award-winning group, "Chesapeake Scenes."



## About the Team

For the Upper Eastern Shore Tributary Team, 1999 was a year geared towards outreach. The effort helped get information to people in the Watershed who could use it to improve water quality and reduce nutrient pollution entering the Bay and its tributaries. This outreach successfully touched a variety of constituencies, including State legislators, County officials, municipal officials, town managers, county planners, wastewater treatment operators, engineers, developers, realtors, waterfront homeowners, and the general public.

Team members have also gathered together at several meetings this year to hear presentations on a variety of issues, becoming better informed so that they can inform others about what can be done to improve water quality in

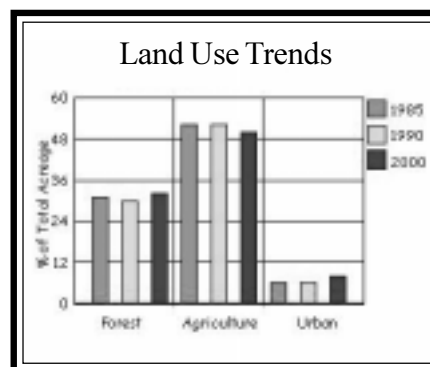
the Upper Eastern Shore Watershed.

## Accomplishments

### Wastewater Treatment Plants with Biological Nutrient Removal (BNR)

Upper Eastern Shore Tributary Team members met with Elkton and Chestertown town officials and wastewater treatment plant operators in order to explain the importance of upgrading their wastewater treatment plants with Biological Nutrient Removal technology and encouraging

them to enter into an agreement with the State to cost share the financial burden of the upgrade. Deliberations began in early Spring, with the result being a successful signing of the cost share agreements in July and August of 1999.



Team members also composed letters congratulating the officials on their agreement to upgrade the plants, which were also published by the local papers. Now all five large wastewater treatment plants in the basin are either operating or have programs to install state-of-the-art nutrient reduction practices.

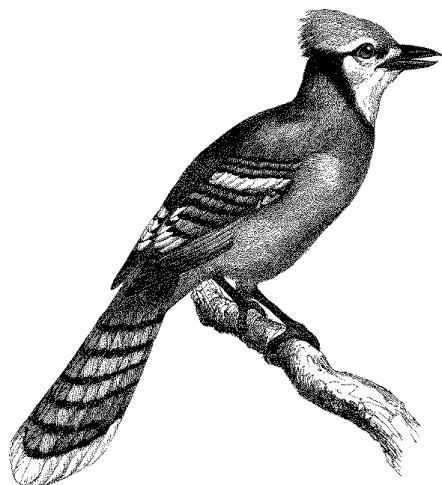
### **Waterfront Landowner Letter**

Team members developed a letter and information for 2,500 waterfront landowners in the Upper Eastern Shore watershed. The information included instructions on ecological practices in the critical area, how to be a “good waterfront homeowner,” with regard to encouraging healthy riparian buffers and discouraging shore erosion, and how to get more information on protecting water quality in homes, communities, on the water, and in schools.

### **Site 104 Open Bay Dumping**

Team members organized two briefings by key players in the decision to deposit dredge material in open water at Site 104. Site 104 dumping is considered by Team members to be counter to the State’s Bay restoration goals and gives the perception that while State and Port of Baltimore officials are asking the public to make sacrifices for benefits to the Bay, they themselves are not.

Team members discussed the issue at length, and composed and distributed letters following the presentations that expressed their concerns that disposal at Site 104 is counter to the State’s Bay restoration goals and presents serious obstacles in terms of public perceptions. Team members also brought their ideas to the Bay Cabinet for comment. The letters described the Team perspective on



the issue of open water dumping of dredge material and how the public might respond to open water dumping in Site 104. They were sent to various elected officials, State agency representatives, and the Governor of Maryland.

### **Team Members**

Alan Girard, Co-Chair, Pickering Creek Environ. Ctr.  
 Jerry Land, Co-Chair, Retired Engineer  
 Jack Ashley, Ashley Brothers Real Estate  
 Darrell Byerly, Farmer  
 Dan Cowee, Talbot County Planning and Zoning  
 John Foster, Citizen  
 Phil Geising, Cecil County Planning and Zoning  
 Rob Hofstetter, Farmer  
 John Earl Hutchison, Talbot County Farm Bureau  
 Bill Jeanes, Jr., Farmer  
 Bill Jenkins, MD Department of Natural Resources  
 Conrad Langenfelder, Farmer  
 Joy Levy, Queen Anne’s County Planning and Zoning  
 Nancy Metcalf, Natural Resource Conservation Service  
 Pat McClary, Gunther and McClary Real Estate  
 Andrew McCown, Echo Hill Outdoor School  
 Michael Moore, Dukes-Moore Insurance  
 Pat Nielsen, Chester River Association  
 Gail Owings, Kent County Planning and Zoning  
 Irving Pinder, Citizen  
 Alan L. Quimby, Queen Anne’s County Public Works  
 Hans Schmidt, Farmer  
 Brennan Starkey, Farmer  
 Tot Strong, Farmer  
 Mike Whitehill, McCrone Inc.  
 Bob Willard, Willards AGRO Service

### **Participants**

Adam Breuggemann, Kent County Planning and Zoning  
 Dorie Coleman, MD Department of Natural Resources  
 Ed Delaney, Wildfowl Trust of North America  
 Kurt Sommer, Redman-Johnston and Associates, Ltd

### **Team Coordinator**

Christy Mills

### **“Designing for Livable Communities and Healthier Watersheds” Workshop**

The Upper Eastern Shore Team organized a successful workshop, “Designing for Livable Communities and Healthier Watersheds,” which was held at Washington College in September 1999. With an attendance of approximately 50 people, there was representation from county officials, designers, engineers, plan reviewers, environmental regulators, planners, and landscape architects. Presentations and discussions included issues such as: setting the stage for the “Livable Community;” incorporating the “Livable Community” vision into a Comprehensive Plan; what it takes to implement the “Livable Community” vision; and finding tools and techniques that really work.

### **Developers' Workshop at Chesapeake College**

In Spring 1999, the Team co-sponsored a workshop that addressed "Making Smart Growth a Reality."

Team member participation highlighted why smarter growth is needed to prevent environmental degradation. The workshop brought together local

government officials, developers, real estate agents, and private sector contractors to learn about and discuss alternative design practices. The Workshop demonstrated the potential threat that development, without the integration of Smart Growth principles, could have on Upper Eastern Shore water quality. On a positive note, many options were discussed to achieve how development could occur in a more environmentally sensitive way.

### **Outreach In Community Newspapers**

Upper Eastern Shore Tributary Team members developed twelve articles that addressed how the public could get involved in the protection of water quality. The articles were distributed to various local papers, and certain articles were published by *The Delmarva Farmer* and the *Kent County News*.

### **Clean Marina Initiative**

Team members supported the adoption of Clean Marina Practices in the Upper Eastern Shore watershed in a variety of ways. Tributary Team members re-



*Partnering with the Wildfowl Trust of North America, the Team hosted their first Upper Eastern Shore Annual Wade-In on the shores of the Horsehead Wetlands Center on Eastern Bay.*

viewed and commented on local marina proposals for Clean Water Action Plan funding to implement Clean Marina practices. Team members also wrote letters congratulating local marinas for adopting Clean Marina practices, and/or becoming a certified "Clean Marina." These letters were sent to the marinas as well as distributed to local papers to be published in the editorial column. Team members have also contacted local marinas to remind them of Clean Marina opportunities, such as the local Clean Marina Workshop held last winter.

### **Habitat Restoration Initiative on Chino Farms**

This year, the Team applied for and received a grant to restore wildlife habitat on Chino Farms in Queen Anne's County. This project is cooperatively managed and funded and will combine efforts from a variety of sources: Queen Anne's County Planning and Zoning (assistance and funding), McCrone Inc. (technical information and assistance), Department of Natural Resources (technical assistance), Chino Farms (technical assistance

and labor), and Maryland State Legislature (general funds). Actual habitat restoration and the development of greenway corridors on the Chino Farms property will begin in Spring 2000. This project will use the latest computer techniques and land use maps of the area to identify, then rank, those locations where habitat restoration will be most effective and valuable.

### **First Annual Wade-In at Horsehead Wetlands Center**

Partnering with the Wildfowl Trust of North America, the Team hosted the first Upper Eastern Shore Annual Wade-In on Eastern Bay, on the shore of Horsehead Wetlands Center. The Wade-In, a symbolic test of water quality, was able to reach over 25 community members who came out to participate. Also in attendance were Delegate Wheeler Baker, and Queen Anne's County Commissioners Marlene Davis and John McQueeney

### **Water Chestnut Eradication**

Upper Eastern Shore Tributary Team members assisted in the outreach and the physical eradication of the invasive Water Chest-



nut (*Trapa natans*) in Lloyd's Creek, a tributary of the Sassafras River. Members of the Upper Eastern and Upper Western Shore Teams helped host public meetings and volunteer days to harvest water chestnut in the Bird and Sassafras Rivers in June 1999. About 300 volunteers from agencies and local communities turned out.

The water chestnut plant and seeds, with long and brittle spikes, are a major hazard to water-contact recreation. The plants also threaten native bay grass habitat, prevent nearly all water use where it exists, create breeding grounds for mosquitoes, and provide only marginal habitat for native fish and birds. Due to the outstanding commitment of volunteers in the eradication efforts, it was not necessary to exterminate the water chestnut with an herbicide application.

### **County Council and Commissioner Briefings**

In the Spring and Summer of 1999, Team members helped prepare and present information on key environmental issues and concerns to County officials in Kent, Queen Anne's, Cecil, and Talbot Counties. The briefings resulted in a successful update for the Commissioners and Council Members and the establishment of a closer relationship between the Counties and Tributary Team members.

### **Legislative Environmental Briefings**

In January 1999, Team members helped prepare and present information on key

environmental issues to the Maryland State House Environmental Matters Committee and the Maryland State Senate Economic and Environmental Affairs Committee. The briefings resulted in a successful update for the legislators as well as an opportunity for dialogue to be established

between the State legislators and Tributary Team members.

### **Watershed Signs at Stream Crossings**

In January 1998, Upper Eastern Shore Tributary Team members suggested to the Maryland House Environmental Matters Committee that highway signs be erected at stream and river crossings with their corresponding watersheds labeled. Over the past two years, State Highway Administration has erected these signs, with up to ten posted in each watershed. Upper Eastern Shore Tributary Team members wrote a letter to Transportation Secretary Porcari in acknowl-



*In 1998, fifty Watershed Signs were erected throughout all of Maryland. Here, Team Co-Chairs Jerry Land and Alan Girard pose next to one of the ten signs posted in their basin.*



*Team members assisted in the outreach and physical eradication of the invasive Water Chestnut in Lloyd's Creek, a tributary of the Sassafras River.*

ment of this outreach effort. As of December 1999, nine signs in the Upper Eastern Shore watershed have been posted.

### **Water Resource Leadership Initiative Program**

Throughout 1999, two Upper Eastern Shore Tributary Team members and a Team staff person participated in the Water Resource Leadership Initiative program. The program was designed to create a network of leaders on the Eastern Shore that could work to develop better communication, facilitation, and mediation skills and apply those skills to the protection and improvement of water quality on the Eastern Shore.

### **Developing and Distributing a Streamside Buffer Video**

Upper Eastern Shore Tributary Team members contributed feedback and photographs to the development of a video that highlighted the benefits of streamside buffers. The video and workshop sessions were developed by the Alliance for the Chesapeake Bay.

peake Bay in cooperation with all ten Tributary Teams. The team has also developed a plan for distributing and showing the video, which will be implemented in year 2000.

### **Response to the Renewed Chesapeake Bay Agreement**

Upper Eastern Shore Tributary Team members reviewed and commented on the Alliance for the Chesapeake Bay's recommendations for inclusion in the renewed Chesapeake Bay Agreement. Comments were distributed to elected officials and to the Chesapeake Bay Agreement Steering Committee.

### **Talbot County Waterway Monitoring**

In coordination with Talbot Rivers Protection Association, the Chesapeake Bay Foundation, and the Chesapeake Bay Maritime Museum, Team members have been participating and leading two of the six teams that are monitoring water quality and sampling for nitrates and phosphates in the major tributaries of Talbot County. There are 102 sample and data sites being monitored every two weeks. This effort was funded by the Rauch Foundation.

### **Agricultural Field Days**

The Team had a display at the Chesapeake Farms and Wye Research and Education Center agricultural field days. Their presence at the field days serves to share information with land-owners about practices to reduce nutrient pollution.

## **Recommendations**

Team members would like to recognize Chestertown and Elkton's agreement to upgrade their wastewater treatment plants with Biological Nutrient Removal as an example of local government cooperation in pollution prevention. The Team encourages local government cooperation in the implementation of nutrient reduction strategies.

Team members encourage the continued legislative support of the Cover Crop Program. Team members recognize that this Program is extremely beneficial in absorbing nutrients and preventing nutrient runoff and, therefore, request that funds for this Program be annually awarded and extended to encompass more subscribers.

Team members encourage Clean Marina practices by supporting outreach efforts to encourage more widespread use of and installation of pump-out stations. Team members also encourage the designation of 'No-Discharge' zones in the Chesapeake Bay.

Team members encourage Maryland's Legislature to ban phosphates in dishwashing detergents. This is in light of the positive impact

that the ban on phosphates in clothes-washing detergents has had on nutrient loads entering the Bay.

Team members recommend that the Maryland Department of the Environment be more stringent with wastewater treatment effluent monitoring and enforcement of wastewater effluent discharge violations on Maryland's Eastern Shore.

Tributary Team members recommend that the Maryland Department of Natural Resources to be more stringent with their enforcement of living resource violations on Maryland's Eastern Shore.

Team members recommend that Maryland's Legislature support the nutrient reduction efforts of the Tributary Teams, specifically in their legislative decisions regarding sediment and nutrient reduction.



*Team members sponsored various education efforts to assist residents in improving water quality and reducing nutrient pollution in their watershed and the tributaries of the Bay.*

## Team Priorities

### Streamside Buffer Outreach

Workgroup members will develop outreach projects to encourage public planting of streamside buffers. This may include participation in a grow-out station and/or distribution of the streamside buffer video.

### Chino Farms Habitat Restoration Project

Workgroup members will use Habitat Restoration Initiative (Maryland State Legislature) funds to restore wildlife habitat and corridors on the Chino Farms Property in Queen Anne's County.

### Distribution of Waterfront Landowner Letter

Workgroup members will distribute a letter and information to waterfront landowners explaining what they can do to protect and improve water quality.

### Community Outreach Through Local Newspapers

Workgroup members will continue to submit articles and encourage the publishing of articles that can educate readers about nutrient reduction and other water quality issues. In reference to correspondent outreach, Team members will continue to write letters to the appropriate stakeholders regarding issues that could affect water quality in the Upper Eastern Shore tributaries.

### Information for Landowners Living in the Critical Area



*In 1999, two Team members and a coordinator participated in the Water Resource Leadership Initiative program. The program was designed to create a network of leaders, work to develop better communication, facilitation, and mediation skills, and apply those skills to the protection and improvement of water quality on the Eastern Shore.*

The general public, especially property owners along the shoreline, has little understanding of the requirements and responsibilities of owning property in the Critical Area. The Team believes that a modest outreach program can make a significant improvement in adherence to regulation. Placing basic information into the hands of those people who have responsibility for a portion of the Critical Area can make a significant improvement in voluntary compliance. The Team will continue to work with counties in the Watershed to develop literature specific for each. This material will be communicated to all homeowners living in the Critical Area. Further, materials will be issued directly to new property owners when the property is sold or transferred.

### Filter Feeders

Workgroup members will develop projects that involve filter

feeders, the filter feeder's potential to clarify water quality, and filter feeder protection and recovery efforts.

### Public Information Workshops

Workgroup members will coordinate public information workshops on the issues of filter feeders, clean marina practices, and growth management for homeowner associations.

### Member Recruitment

Workgroup members will solicit member participation from constituency groups that have been previously under-represented.

### Clean Marina Program Support

Workgroup members will encourage the use and development of more pump-out stations. The Workgroup will also invite marina participation in the Tributary Strategies and will continue to support the Clean Marina program whenever asked.



# CONTACTING THE MARYLAND TRIBUTARY TEAMS

<http://www.dnr.state.md.us/bay/tribstrat/>

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# 1999 ANNUAL REPORT ON MARYLAND'S TRIBUTARY STRATEGIES TEAMS

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*Tributary Team staff making a difference - Eastern Shore Coordinator Christy Mills (left) and Program Manager Danielle Lucid help reforest a watershed.*

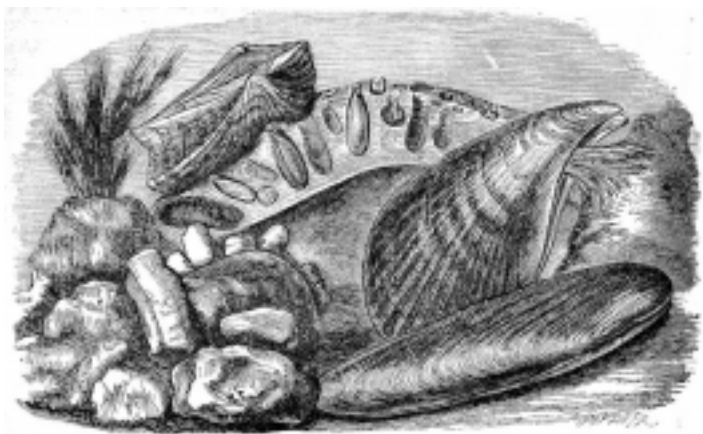
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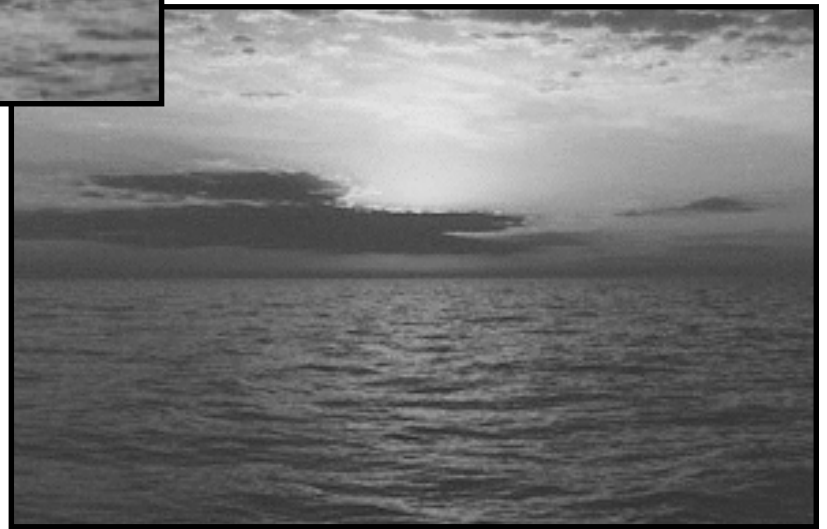
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**Most of all, this report is the result of the hard work of the 450 citizens across Maryland who make up Maryland's Tributary Teams. We thank you!**





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**Parris N. Glendening, Governor**

**Kathleen Kennedy Townsend, Lieutenant Governor**

